

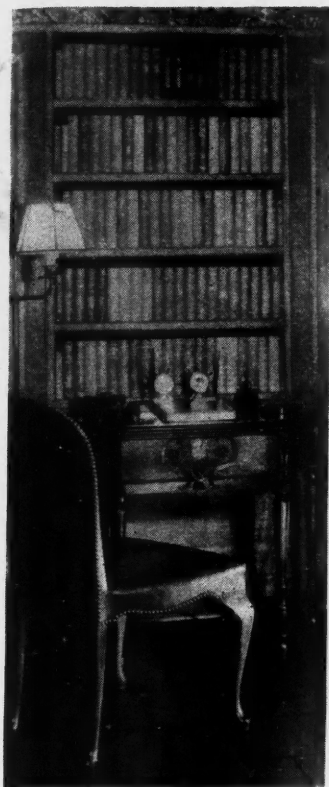
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AMERICAN BUILDER AND BUILDING AGE

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BUILDING INDUSTRY

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*Many a house
has been sold by this Cabinet Top...*

THE attractiveness of the Formica kitchen top has been the deciding element in many sales. Few women see one without wanting it. It gives flash and appeal to a house.

These tops are finished in a high lustre black or black and gold marble. It is an extremely durable surface and one that will not spot with liquids of any kind. It stands 300 degrees of heat. It is much quieter than a vitreous top and easy to keep clean.

Try the selling effect of installing these tops in a few of your houses.

Write for the Facts

THE FORMICA INSULATION COMPANY
4643 Spring Grove Avenue, Cincinnati, Ohio

FORMICA
for BUILDING PURPOSES

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

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V. 54-55

AMERICAN BUILDER AND BUILDING AGE

TO RELEASE PRESENT PENT-UP DEMAND

FOR the past two years we have been hearing a good deal about surplus housing—the over-built condition of the home building market. Vacant homes and apartments in depressing numbers have been “surveyed” in almost every American city and town; and the conclusion generally reached is that very little, if any, new home building will be needed for years to come.

The natural result has been that many builders who in normal times are full of enterprise, courage and resourcefulness have lost heart, and today are licked. The same is true also for many of the retail dealers who supply these builders, and for many of the manufacturers of home building materials and supplies. They believe that there is no business and that there can be no business. They are no longer trying to sell—they are licked.

In refreshing contrast to this attitude of dumb defeat have come the recent signs of revival in general business, together with new, authentic information as to an enormous pent-up demand for new homes and home improvements and for house furnishings and equipment, which is ready to break just as soon as normal business conditions return.

Fifteen and one-half per cent of the employees of the Graybar Electric Company, located in seventy-three cities from coast to coast, report that they plan to buy or build new homes averaging \$6,000 each; 7½ per cent want to improve their present homes by putting in new heating equipment; 38 per cent will be in the market for floor coverings and 47 per cent voice a determination to refurnish their homes.

Such evidence of a pent-up consumer demand for the goods and services of the home building industry should overcome much of the pessimism and inertia which have been pervading this business.

If these percentages returned by the Graybar employees are typical of all employed persons in the United States, it would mean a total pent-up demand for over 3,000,000 new homes which will be purchased and built within the next two or three years, as business conditions improve. It would mean a further expenditure of \$400,000,000 for modernizing old heating plants, and \$1,500,000,000 for furniture and floor coverings.



HOME BUILDING DEMAND IS INCREASING

That the future purchase plans of these Graybar employees may be accepted as fairly typical of all wage earners is indicated by the broad scope and coverage of this survey. It included executives, sales and service men, typists, clerks, accountants, warehouse men, truck men and office boys. The group taken as a whole is believed to represent a fair cross section of salary and wage earners in the United States.

In addition to the expressed determination on the part of 15½ per cent to buy new homes, 33 per cent are planning to purchase new automobiles, 44 per cent refrigerators, and 25 per cent washing machines. These percentages applied to the entire United States would indicate a present potential, but deferred market for 3,000,000 homes, 6,500,000 autos, nearly 9,000,000 refrigerators and 5,000,000 washing machines.

Certainly this is a market outlook for the immediate future that should be extremely stimulating to the business men engaged in these lines. To turn this indicated potential, however, into jobs “signed and sealed” is going to take more intelligent organization and more aggressive selling than the building industry has yet displayed. Competition for these consumer dollars is going to be keen; and just because 3,000,000 new homes are wanted doesn’t guarantee that 3,000,000 will be sold and built. In order to release any such tremendous wave of home building, better homes must be built at much lower costs and they must be financed honestly, yet safely. If this can be done, the normal inclination of most American families toward home owning will richly reward real salesmanship.

Where Shall America Turn?

"THERE'S NO PLACE LIKE HOME"

By HENRY T. EWALD,

Pres. Campbell-Ewald Company

MEN look at the weakened structure of business in "our poor little rich country" and wonder what industry can supply the stimulus for recovery.

Perhaps, if we turn our eyes away from brooding factories, stores and office buildings to the 30,000,000 homes of the nation, we shall find the answer to some of our problems "right in our own backyards." For America has traveled a curious circle away from home and back again during a single generation.

Not so long ago, when we said "There's no place like home," we spoke and thought of the beauty, comfort and family ties of that dearest place on earth. Then came "prosperity"—and with it a gradual "flight from home."

Father, when he didn't "stay at the club," found himself returning more and more frequently to a household from which other members had flown. Almost imperceptibly the old familiar saying took on a new meaning. It became literally true—There was no place like home. The deeper significance of that word disappeared from the consciousness of tens of thousands of families.

Then came depression. And now the circle of our wanderings is completed.

Somewhat reluctantly at first—but with a growing feeling of relief, tranquility and enjoyment—the American family has come back home. Once more they are saying "There's no place like home," and genuinely meaning it. But—are they going to stay?

* * *

It is up to individual fathers and mothers on the one hand—and the great forces of the building industry on the other—to make American homes more livable—to realize that the home of 1900 will no longer suffice for the family of 1932—to modernize the home by installing some of the wonderful comforts of this new day. For our American homes are by no means as modern as we like to think.

Less than 22 per cent of rural and village homes, for example, have bathtubs—and, surprising as it may seem, only 68 per cent of city homes can boast this common necessity.

Approximately 85 per cent of homes in most communities are urgently in need of painting, decorating, repairing or alterations.

Less than 20 per cent of the wired homes of the United States enjoy the comfort and utility of iceless refrigeration.

The number of oil burners in use is even smaller, for

less than 4 per cent of American homes are equipped with this modern type of heating.

As for that vital new development, air conditioning, scientifically-cooled homes in sweltering summer months are virtually unknown.

And yet, some say "Our American job is finished." Who can doubt the almost universal desire for these improvements—or overlook the significance, from an economic standpoint, of the situation confronting us? In the hearts of our people the greatest revival of home interest in a generation! The most wonderful home comforts and luxuries of all time! And thirty million American homes waiting for them!

* * *

Here is opportunity—a direct challenge to the finest brains of industry—and a market holding rich rewards for those with the will and skill to supply the need.

The die-hard depressionists will ask, "Yes, but what are people going to use for money?" The answer is, America is facing depression—but America is not beggared. We have lost much—but we have not lost per capita wealth far beyond any other nation on earth—nor a payroll greater even today than all Europe combined—nor skilled manpower and industrial equipment unequalled anywhere in the world.

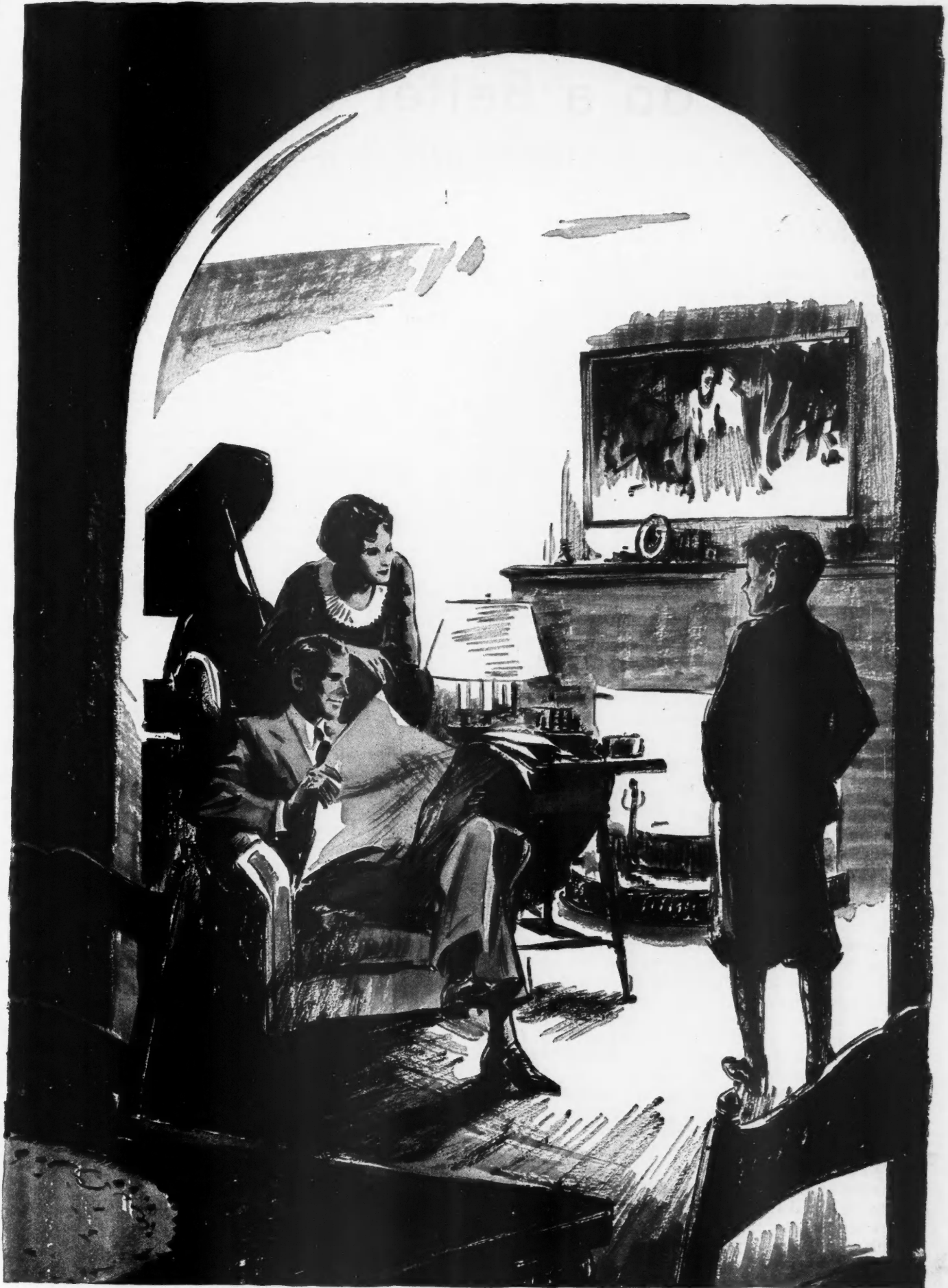
The real question is: Have we lost courage—initiative—ingenuity? And that is a question, not for the public, but for builders in every line. And salesmen. And advertising men, perhaps, most of all.

For the big task of the building industry today, and of all other industries seeking buyers, is to overcome Apathy with Advertising. Advertising is equal to the task. It will improve the present and make great the future for those businesses which employ it wisely. But it must be good advertising—burrowing deep into the consciousness of the people—soundly planned, ably prepared, well directed.

The words, "Let's get busy!" must supplant "What's the use?" as a national slogan—a policy of do something must replace a policy of do nothing—at least among those who hope to hold leadership tomorrow.

America is coming back! What industry can lead the way? Where shall America turn for stimulus to recovery? Here is one suggestion: There's no place like home!

With a growing feeling of relief and real enjoyment, the American family has come back home.



An Expert Tells Builders and Dealers How to do a Better Selling Job

By FREDERIC KAMMANN

SIX SALES STEPS

- 1—Offer salable unit-priced products adapted to the local market.
- 2—Render complete service needed to hold good will.
- 3—Meet and better competitive features of other products.
- 4—Provide satisfactory terms of payment.
- 5—Present selling story effectively and at the right time.

APPARENTLY it is about time for the local small construction industry to furnish its own Moses and stop waiting for some outside Moses to lead the way to the promised land.

It makes no material difference who sells the products of the small construction industry. But it is certainly true that no single factor should carry the entire selling burden. The dealer of building materials gets one half of the revenue from the average project, so he can't afford to do all of the selling. The same applies to the contractor. Plainly, the fair way to distribute selling effort and selling expense is for each factor to do his share of the selling.

Dealers and contractors cannot subsist on the few sales now trickling through. Something must be done to speed them up. Meanwhile other forces, not now of the industry, are laying their plans for the wholesale harvesting of the small construction market. Time is an important factor, and a delay of a year or eighteen months is likely to be serious and perhaps fatal.

50 Per Cent Were Interested

The small construction industry, as a whole, is not sales minded. It has been trained in the school of smart buying, then letting the customer come and purchase if he will. Now, it seems, he won't come and buy and the natural but erroneous conclusion of the industry is that the customer hasn't any money. He has enough money to keep general business going at better than 60 per cent of normal, but not enough money (it seems) to keep small construction going at much better than 30 per cent of normal. Why this discrimination against the small construction industry? If the customer is at fault let us ask him what is the matter.

A dealer in a city of 40,000 decided to do that very thing. He sent five girls out to call on people, with cards listing the products and projects he thought they might buy, and these products were all sorts of small construction jobs ranging from a new house to the simplest and most expensive house improvements. He felt sure the investigation would satisfy anyone that people simply were *not interested* in such products.

He was greatly surprised to find that nearly 50 per cent of the families visited *were interested* in small con-

struction jobs, and he received reports on fully 75 per cent of the families called on by the girls. That meant that nearly 35 per cent of the families in his market were prospects, either immediately or later, for the things he wanted to sell.

But by the tragic process of ignoring nearly every rule of good salesmanship the results of the survey were largely lost. A few jobs were sold and the selling expense was high. The dealer, carrying the selling burden alone, was forced to set his prices high enough to cover this cost, and that gave his contractors and sub-contractors a chance to take many of the jobs at lower prices (since they had no selling expense); and the dealer was very discouraged about it.

Everyone in the industry knows by bitter experience the cost of intra-industry competition; how dealers, contractors and real estate builders can squeeze their own profits out of the sale by fighting among themselves over the business. So the first important step is to organize the local building industry groups into a unit, with each participant sharing in the results in proportion to his individual contribution of effort. A contractor may desire only three small jobs, and put forth enough effort to get those three jobs. But when he gets them he finds they are satisfactory jobs, carrying a fair profit to reward him for the effort made.

Add in the Selling Cost

The next step is to see that every selling price contains a fair amount to cover the cost of selling. If 10 per cent is adequate, that 10 per cent is in every selling price and is paid to the factor who makes the sale. If a dealer and contractor both work to develop the sale, the commission is divided between them.

But this is all preliminary. It is simply getting ready to do business and thus far we have not reached the real problem—the problem whose solution is the vital element in the situation. That problem is *personal salesmanship*. How are you going to get it, and how are you going to apply it?

Can you imagine a refrigerator salesman attempting to sell a prospect with only the information the usual small construction salesman has?

Prospect: I'm interested in a refrigerator.

Salesman: What size and kind do you need?

Prospect: I don't know anything about it; I thought you'd tell me.

Salesman: How in the world would I know? I suppose you want the electrical kind.

Prospect: Possibly. What does it look like?

Salesman: Well, it's a sort of a square affair, usually about five feet high, with a door in front and a refrigerating unit on top.

Prospect: What color is it?

Salesman: White; or you can have any color you want, I guess.

Prospect: How much does it cost?

Salesman: Of course, I can't tell you until I know the size and style you want. Why don't you make a sketch of what you have in mind and I'll get it figured for you?

Prospect: I couldn't make a sketch to save my life. Well, I was just curious about it. Maybe we'll do something about

it later. If we do, I'll get in touch with you.

Salesman: All right; just remember, we're the biggest dealers of refrigerator materials in town. We handle nothing but quality stuff and we'll quote you a rock bottom price on your requirements. We can put you in touch with good workmen to build it, too.

Prospect: Thanks; I'll remember.

If this imaginary interview is exaggerated it is in giving the salesman more information about his product than the average small construction salesman displays.

There are no made-to-order salesman in this industry, or in any other, for that matter. It is impossible to advertise for "an experienced house to house improvement salesman" and get enough response to wad a shotgun. Occasionally a good salesman from some other field will get into small construction through ignorance or a mistake, but he soon gets out, if he can. Other industries, more sales minded, offer more attractive opportunities.

So it is up to the small construction industry to train its own salesmen. Not only must they be trained, they must be properly equipped. These salesmen, for the time being at least, must be the men now engaged in the small construction field as dealers or contractors or sub-contractors or real estate men. If the industry cannot organize to sell its own products it is rather foolish to expect outsiders to come in and do the job. If there is to be improvement in merchandising it must come from within the industry. Otherwise the present system of distribution will pass out.

But before a salesman can be trained within this industry it is necessary to develop a sales proposition—what are we going to sell, and how are we going to deliver it, and what service must we render, and what terms must we make, and how shall we collect for it? Fortunately the idea of selling in completed units has gathered sufficient acceptance to answer the first question. The principle has become widely recognized as sound; but that's about all. Very few dealers or contractors have taken the next step and organized a fairly complete range of small construction units in completed form, illustrated, described and priced. Dealers and contractors who have displayed priced house designs have found them valuable in arousing interest. That is going part way. It takes in only the hardest-to-sell products and limits selling to but a very thin section of the market.

Sell Jobs as Complete Units

Extending the range of standard units to include all kinds of house improvements is a perfectly obvious step. A house-to-house investigation will promptly disclose what items are most interesting to people. Some of these items will have been built recently. Photographs of those jobs offer tangible evidence of products available. Sketches can be made of other projects, if photographs are not to be had, or if the actual jobs are inappropriate.

Most sales will be variations from the samples shown. That makes no difference. The prospect cannot fail to be impressed by an illustration of *something like* the project he is considering. The complete description helps build

up his confidence. The quoted price is important information. How much more complete and intelligent is the solicitation, or sales interview, embodying all these elements in which the prospect is immediately and directly interested.

Such selling equipment has a great bearing on the attitude of the salesman. He has something to show, to explain; his product has shape, size and color. It looks like something a person is justified in buying.

What if it IS to be longer, or higher, or a different color? The

variations are more easily explained when there is a typical product which is understood by both the salesman and his prospect. The price, of course, will vary too, but the prospect feels that he is not leaping blindly into the realms of pure speculation.

He has *something* tangible to consider.

As various projects are sold, in this way, the selling kit grows and the chance of having the *exact* job the prospect needs is increased.

Factory - made products are presented in this fashion with consistent success. Salesmen of such products

are not expected to make sales on the sheer power of oral description and importunity. Information desired by the prospect and necessary to his decision is compiled in advance, so the salesman is not handicapped by ignorance of the elementary points in his proposition. It seems rather silly to expect to sell small construction units effectively through methods which were discarded by other industries years ago.

The answer is to reduce each typical job to simple elements, present it quickly and understandably to the prospect and avoid repeated calls which do not further the sale, but which do increase the cost of selling. To accomplish this, give mental answers to the following questions:

1. What small construction units will be most readily salable in your market this fall and winter; next spring and summer?

2. Having developed a list of thirty or forty specific items in the order of their probable sale, list the features of service-to-the-customer which will be expected of you, or which will help the sale of these units.

3. Are these units, as you picture them in your mind, the same as anyone else might provide? If so, what features of quality, additional convenience, better value, lower cost, wider usefulness can be incorporated in these units to give them stronger appeal to your prospective customers?

4. What terms and what financing must you arrange to place these units on even competitive footing with other products in the same price class offered to your prospects?

5. How and when can you place your sales story before your prospects so as to interest them most effectively?

(Continued to page 48)



Directors Promise Quick Action By Home Loan Banks

**FUNDS FOR NEW WORK, MODERNIZING AND
MORTGAGE RENEWAL TO BE IMMEDIATELY
AVAILABLE WHEN BANKS OPEN OCTOBER 15**

THE five directors of the Federal Home Loan Bank were speakers at the annual convention of the U. S. Building and Loan League at French Lick, Indiana, Sept. 1—3. All of them referred encouragingly to the results to be expected from the new banks and predicted speedy action in the supplying of mortgage funds for the hard pressed building industry.

Twelve hundred delegates at the convention enthusiastically endorsed the Home Loan Bank Law. Since they represent the forces most necessary for its successful operation, this is good news for builders.

From start to finish of the convention, the Home Loan Bank was the chief subject of discussion. High lights from the remarks of Franklin W. Fort, chairman of the Home Loan Bank Board, and those of directors Bodfish, Gries, Best and Adams follow:

Chairman Franklin W. Fort

"The Home Loan Banks will be ready to function by October 15th. Thereafter, mortgage money will be available on sound loans. While we are getting ready we hope that every building and loan association will suspend the foreclosure of mortgages, at least where there is the slightest possibility of hope for the mortgager, and preserve the savings of the owner against forfeiture in a real estate market where there are no bids.

"There are certain types of new loans that should be made. The building industry cannot begin to recover its equilibrium, the millions whom it employs directly and indirectly cannot regain employment until some activity in construction starts. Your associations hold thousands upon thousands of mortgages on properties which are deteriorating physically for want of repair. You can far better afford to add an additional loan of one thousand dollars on many a mortgage than to take over the property in its present condition and then make the repairs. You should inspect every property on which you have a mortgage and, if the building when repaired will stand an additional loan, make it, to be used for the repairs. Your mortgages will be better and the building trades will start employment before winter.

"We approached the matter of fixing the Regional Home Loan Bank districts by having prepared a series of maps, on the face of which was written the holding of mortgages by building and loan associations, by savings banks and by insurance companies within each state, wherever the mortgaged property was located. These maps instantly showed a tremendous shortage of mortgage lending capital in vast stretches of the United States and a correlative concentration of such capital in very small sections. Institutions eligible for membership in the Home Loan Bank System located in my home city of Newark, New Jersey, for instance, own more mortgages than are owned by like institutions in the entire country between the Mississippi and the Pacific.

"We therefore adopted as our first principle that we

would, so far as possible, couple in every district states possessing substantial mortgage lending institutions with states where the shortage of such capital existed, in the hope that through the aqueduct afforded by the Home Loan Bank System, capital might be slowly but surely siphoned from the financially stronger states to the weaker. This, we believe, in time will inevitably result in the creation and growth in the financially weaker states of self-contained mortgage lending units, which will bring back home the ownership of local mortgages and will retain at home the vast sums of interest now paid to other and sometimes remote sections of the nation.

"As a means of reversing some of the flow of money and as a means of strengthening the financial structure of additional cities, we determined to place our twelve banks, without exception in cities that had neither a Federal Reserve nor a Land bank.

"Another reason for avoiding Federal Reserve cities seemed to us to exist in the nature of the system we were about to install. The Federal Reserve cities are, and of right should be, the dominating factors in the regulation of short-term loans, particularly those based on commercial transactions. With this is naturally allied the business of lending upon securities, since these securities are capable, in normal times at least, of being transferred into cash on short notice. We were concerned with setting up a system whose chief function was the regulation of long and nonliquid credits based upon real estate. In their essence, the handling of these credits calls for a different psychology and a different type of judgment from that necessarily associated with short-time lending. Some of us believed that much of the trouble real estate is now passing through—so much of it as is separable from the general depression—is a direct consequence of the intermingling of the handling of short-term loans on notes to speculative builders, with long-term loans on mortgages. So believing, we felt that future stability in the whole field of real estate investment could be best assured by so locating the Home Loan Banks that their atmosphere and viewpoint might be detached from the controlling influence of commercial banking.

"The Home Loan Bank System, properly constituted, developed as it should be developed, means the ownership of the community by its own savings institutions; and the operation and control of these banks will rest in their future millions of shareholders, not by right of suffrage, but by right of thrift."

Bodfish Sees Big Benefit

Morton Bodfish, formerly executive manager of the League and now one of the Home Loan Board directors, spoke frankly about the future of the Banks.

"Congress did not pass the Home Loan Bank Act to save a lot of building and loan associations," he said. "Its

main purpose is the getting of additional funds into circulation among home owners. The bill was driven through in the face of opposition by commercial and mortgage bankers and insurance companies.

"What is the trouble with business today? What was it in 1876? In 1895? Real estate. Real estate is the trouble this time. Everyone is loaded with real estate. Our commercial banking system has not had any way of developing additional credit based on real estate collateral. The Home Loan Bank Act provides a way to raise money on real estate collateral such as we have never had before. This law is going to separate commercial banking from long-term investment lending. From now on none of the troubles and tribulations of the banking system will affect long-term investment.

"This is a better law, a more perfect mechanism than the Federal Reserve System had when it started or has yet.

"The Board members have more authority than the Federal Reserve and a dozen other boards put together. This Board can run things. This is important as other ventures have failed because there was not sufficient authority in the management. The Board has authority to pass on membership. It will not take in any but those who are living up to the best ideals of building and loans institutions. The law says that it must admit only those institutions whose character, home-financing methods and conduct of business are sound and economical. Membership in the Home Loan System is going to be a badge of honor for any building and loan association.

"This will be a going concern immediately. As soon as the books are closed, at least \$125,000,000 will be available at once.

"Members of the Regional Banks must make such loans as are, in the eyes of the Board, long-term loans. This is because the little, common, ordinary man with an income of around \$25 a week should never attempt home ownership on a one-year basis. I do not believe in a one-year mortgage on a small home. No associa-

Home Loan High Spots

"This will be a going concern immediately. As soon as the books are closed at least \$125,000,000 will be available at once."—MORTON BODFISH.

"Inspect every property on which you have a mortgage, and if the building when repaired will stand an additional loan, make it, to be used for repairs. Your mortgages will be better."—CHAIRMAN FORT.

"This is a better law, a more perfect mechanism than the Federal Reserve System had when it started or has yet."—MORTON BODFISH.

"Because of the greater safety of amortized loans you can make first mortgages for 75 or 80 percent of the value of the home, and so eliminate the second mortgage. The Federal Home Loan Banks put a premium on the long-term amortized loan—invite you to make them your own credit reservoir."—JOHN M. GRIES.

"The System's provision of credit for these purposes (modernizing and low cost homes) will put thousands of men back to work. Recovery will rest in large measure upon these repairs and construction."—W. E. BEST.

tion can become a member if the net cost of financing to the home owner exceeds a maximum legal rate of interest or the contract rate. If neither of these is provided by the state law, not more than eight per cent can be charged.

"This means that Uncle Sam is not going to give us the mark of his good name, is not going to give us the benefit of tax-exempt bonds, so that we can borrow at four per cent and turn around and lend it to the home owner at 25 per cent. This system will not be used that way.

"Subscriptions to stock can be paid 25 per cent accompanying the subscription, followed by three payments over a term of a year. Members can probably pay 25 per cent and then if all goes well, can borrow the rest. A member can borrow 12 times the amount paid in on subscription.

"It is my hope that we can get money to the home-financing institutions of the United States at 4½ per cent. The only way we can do this is to issue bonds at less than 4½ per cent. We are going to ask you to turn in unpaid principle on home mortgages equal to practically two for one. Why is this? There are some \$8,000,000,000 worth of prime mortgages outstanding. Why not put up lots of collateral? We have lots of it. This bill is for ordinary folks. Its purpose is to provide ample credit for the small home owner.

"I believe a building and loan association will be able to borrow from the Home Loan Bank up to the full needs of its community. This is possible because it is long-term money. When we issue bonds, what will we have? The bond is, first of all, an obligation of the Regional bank, secured by all the assets of the bank and its capital stock. The Regional banks have behind them the assets of member institutions as well as mortgages two for one and probably two and one half and three for one. These bonds will be the finest securities ever offered the American public, with the possible exception of U. S. Government bonds. If they are not good, there is nothing in this country that is good.

"Congress does unexpected things at times. They were afraid you might not pass on this money to the public. So they said if none of the institutions will make a man a 40 per cent loan the Regional Banks may. As the system gets started, however, I think the member institutions can and will probably make all the loans that would qualify under the direct loan provision. In places where there is no building and loan association, one should be formed.

"Membership in the Home Loan Bank System should be the best badge of quality that a building and loan association has ever been able to present to the public."

Corrects Defects, Says Dr. Gries

How the banks will correct present financing defects and improve future conditions was told by Dr. John M. Gries as follows:

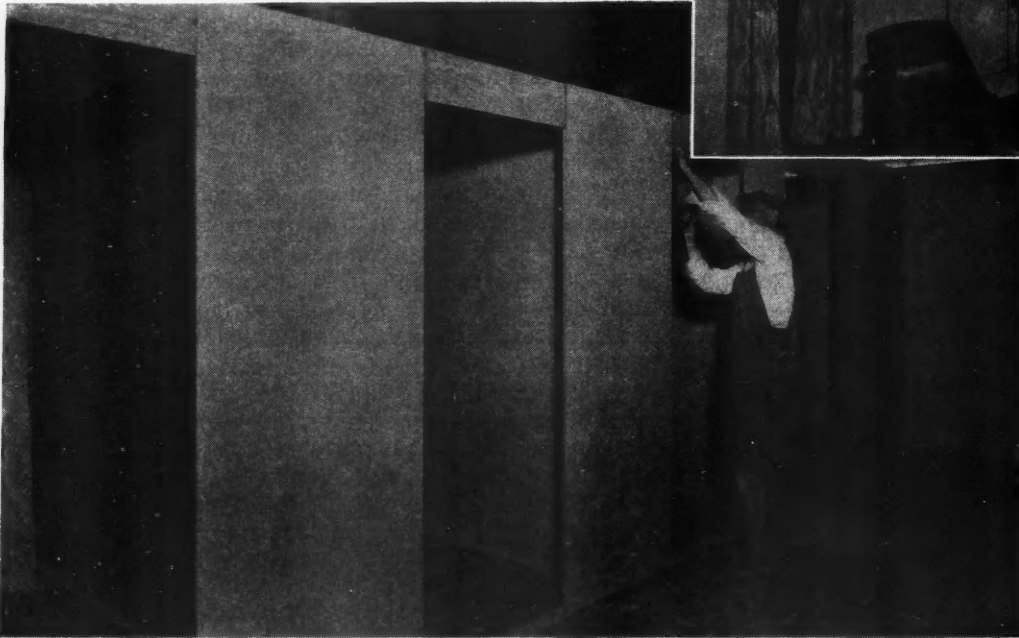
"The defects in our home financing system, which present distress causes to overshadow all others, is the disappearance of mortgage money in hard times. You know why this is and what happens to the home owner as a result. The Federal Home Loan Bank will remedy this defect and give the liquidity to mortgage money necessary to prevent its flight from the field in the first hint of depression, provided you people use the system to its utmost.

"Permanent defects which the home owner always has with him are first, that money for home financing particularly for junior financing costs too much and

(Continued to page 48)

How Three Seattle Builders Licked Old Man Depression

By KENNETH STRIKER



Above—Interior after the remodeling was completed

At left is shown method of installing plywood partitions in modernizing Seattle store

LIKE many other men throughout the country, three Seattle builders, J. Parkinson, W. J. Knapman and J. W. Clark, lost their jobs last winter. And like many other men, they wondered what they were going to do—how they were going at least to keep Old Man Depression at arm's length.

But they've done more than that! *They've licked him!*

And they are now the successful firm of Parkinson, Knapman & Co., specializing in store and office remodeling—busy and thoroughly satisfied with life.

"We are making a science of adapting materials to meet modern plans and decorative treatments, often effecting economies that competitors haven't thought of," says Mr. Parkinson. "By carefully studying new applications of building materials, we have solved the old bugaboo of the 'right bid'—a figure low enough to secure the job, yet high enough to provide for both profit and contingency.

"I think I can illustrate our money-saving use of materials by telling about one of our most recent and successful jobs—the remodeling of a store for Stanton Frederick, Incorporated, a high-class women's shop.

"The plans called for a substantial, permanent-looking layout with seven-foot partitions for the display room, the stock and fitting rooms, and the window backgrounds. We were asked to bid on metal-lath and plaster construction throughout. We did, and got the job—but soon it became evident how a sizable sum of money could be saved without impairing quality. This was by using large panels of plywood. We saw that $\frac{3}{4}$ -inch panels would make ideal partitions because:

- 1—The partition walls would be very substantial and durable and the plywood is crack-proof.
- 2—It would cost only half as much as plaster and metal

lath, and save nearly two weeks in construction time—as well as eliminating the fuss and bother of plastering.

- 3—There would be an additional saving in both labor and space because $\frac{3}{4}$ -inch plywood panels require no studding—thus making the walls only $\frac{3}{4}$ instead of 2 inches thick, the minimum required for metal lath and plaster.
- 4—It would give identically the same effect as plaster when finished.
- 5—In case of removal, the plywood would offer a 75 per cent salvage.

"The big panels went up with a minimum of sawing and nailing. We made areas as large as seven by twelve feet of three 4x7' glue-joined panels. We cut flush, non-warping doors from $\frac{3}{4}$ -inch panels for use in the window backs, but used stock doors elsewhere. The conduit above the windows we made of $\frac{3}{8}$ -inch plywood. We used a composition board to seal the tops of the fitting and dressing rooms because city ordinances specify that they be a material easily punctured.

"In two weeks we had the store ready for carpets and furnishings. The inside walls were painted with a creamy, stipple finish, and the decorative mouldings a flat tan finish. These colors harmonize exceedingly well with the tan-and-orange-grained cabinets that were moved from the old store.

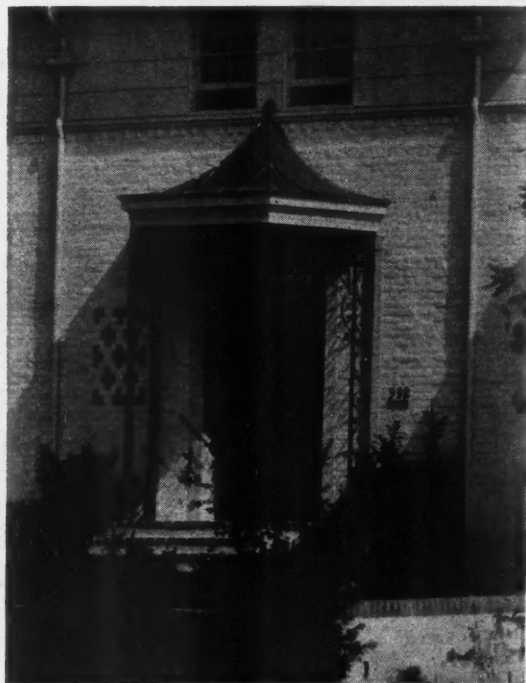
"The point I have tried to illustrate is that we suggest new materials and new methods wherever possible and that we save all the money we can for our customers—without sacrificing plans, quality or workmanship.

"This policy has enabled us to take advantage of present conditions, for, due to the depression, many stores and offices are either moving to smaller or less expensive quarters—or modernizing because of the low cost of materials and labor. And these conditions undoubtedly exist in other cities."

A Good Entrance Makes the House a Better Seller

The architectural details on this and the following pages of our design section are of the type that make houses popular. They are good to look at and good to sell

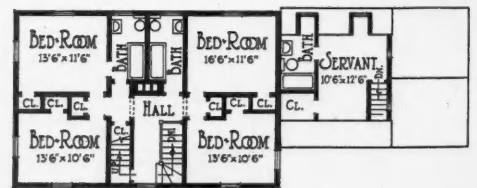
The overhanging porch at the right is one of the attractive features of the Monterey type of architecture growing popular in Southern California. R. S. Barnes, Contractor; Arthur Munson, architect. At left below is Colonial entrance to a home in Atlanta, Georgia, designed by Burge & Stevens. The simple entrance detail at right below was designed by Paul Williams



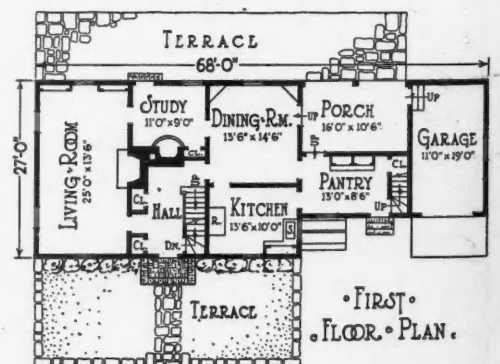


A Spacious Colonial In Conservative Style

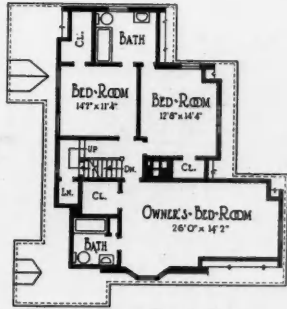
Located at Marbelhead, Connecticut, this attractive home is of simple Colonial style that has long been popular. The front entrance, detailed at the left, opens upon a terrace enclosed with a stone wall. The architect is Waldron Faulkner, creator of many excellent designs. Cost Key is 2.636—205—1170—51—38—20.



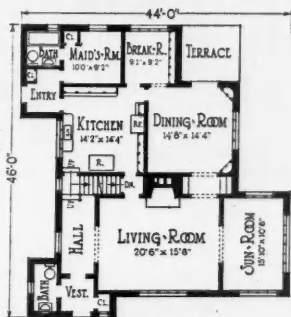
• SECOND FLOOR PLAN •



An English Type With Fine Details



• SECOND FLOOR PLAN.

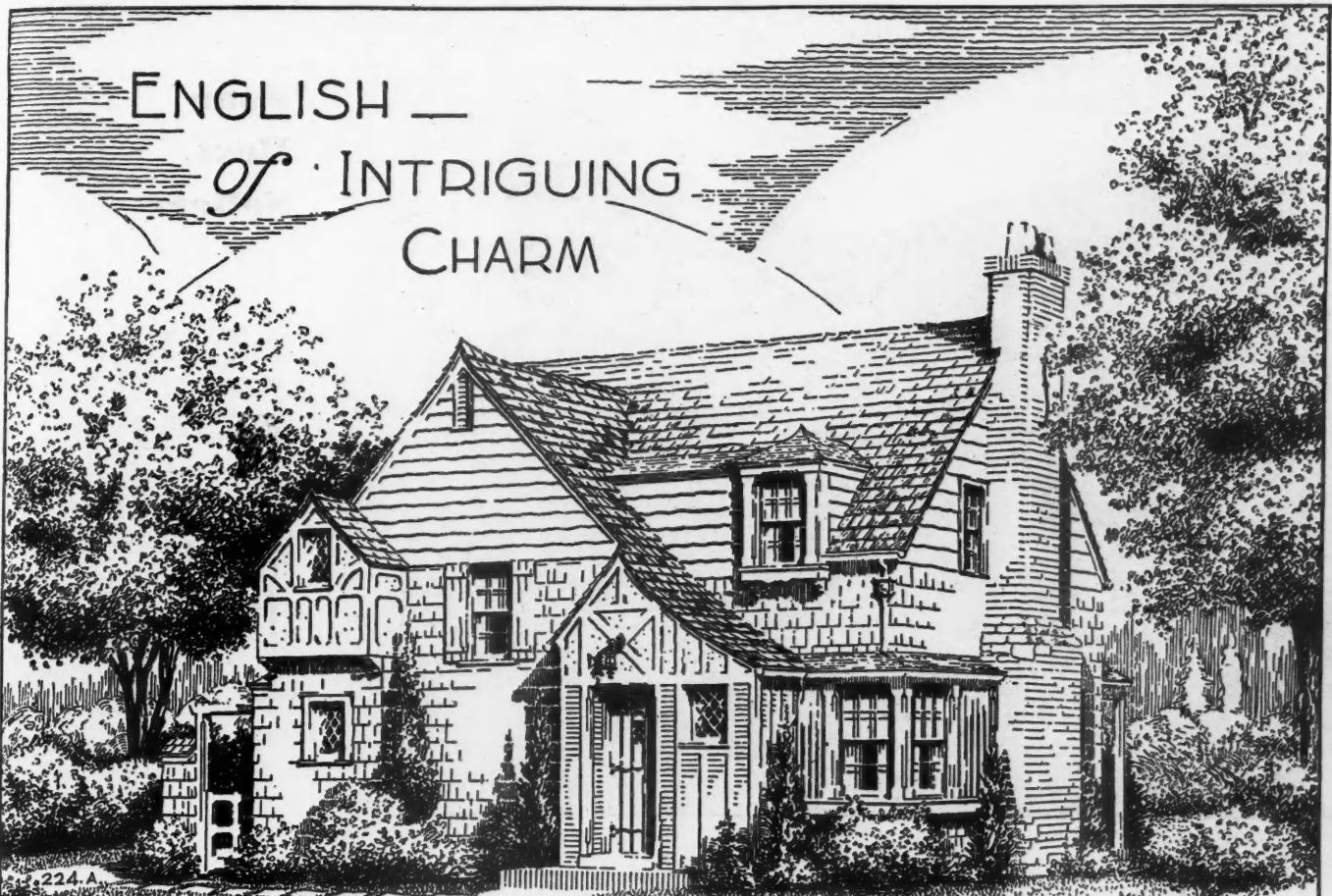


• FIRST FLOOR PLAN.



Royal Barry Wills, Boston architect, designed this especially fine brick English house. The Cost Key is 2.721—188—1438—60—28—28.

ENGLISH — of INTRIGUING CHARM

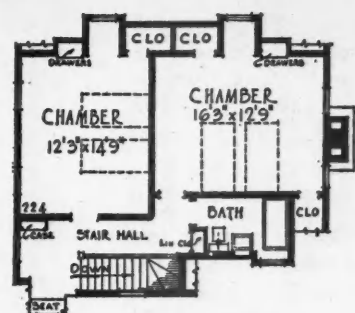


224 A

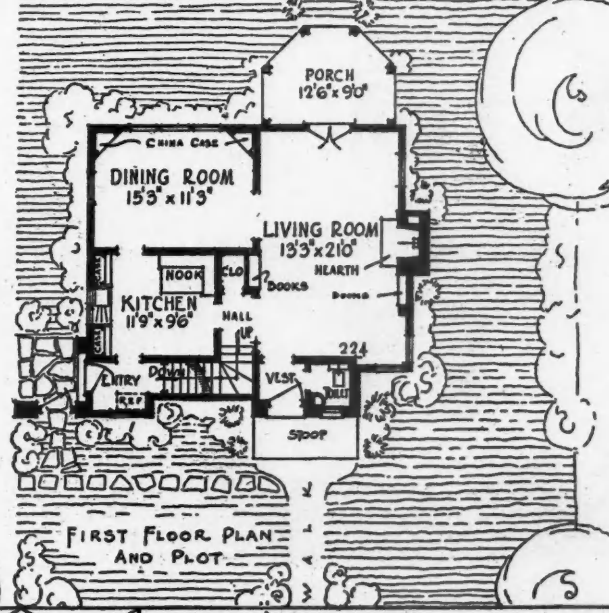
GARAGE

Something different—yet it includes a convenient room arrangement and utilities for modern housekeeping.

L A W N



SECOND FLOOR PLAN



FIRST FLOOR PLAN AND PLOT

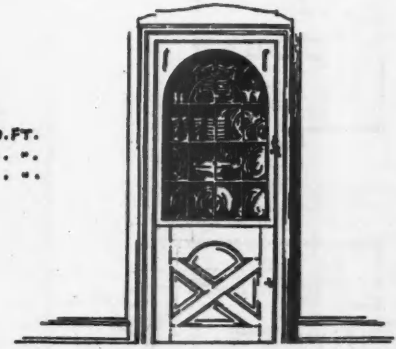
DIMENSIONS
SIZE OF MAIN BUILDING 30'0" x 25'6". SIZE OVER ALL 40'0" x 40'0".
CEILING HEIGHT 1ST. FLOOR 8'3". CEILING HEIGHT 2ND. FLOOR 7'8".
CEILING HEIGHT BASEMENT 7'0"

†

CUBAGE

HOUSE	21200	CU. FT.
PORCH	600
TOTAL	21800

†

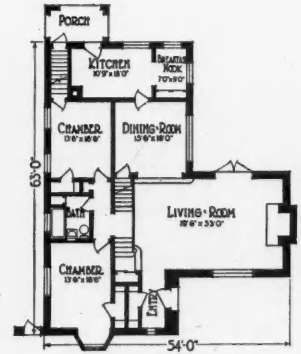


Corner China Case

NPS DESIGN FOR A FIVE ROOM HOME 224A



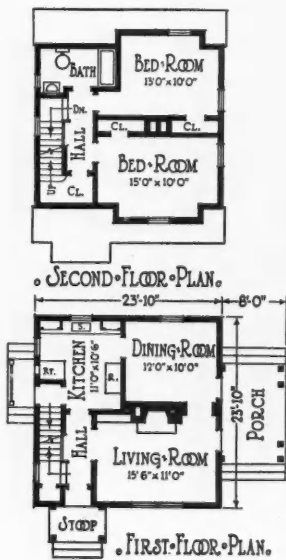
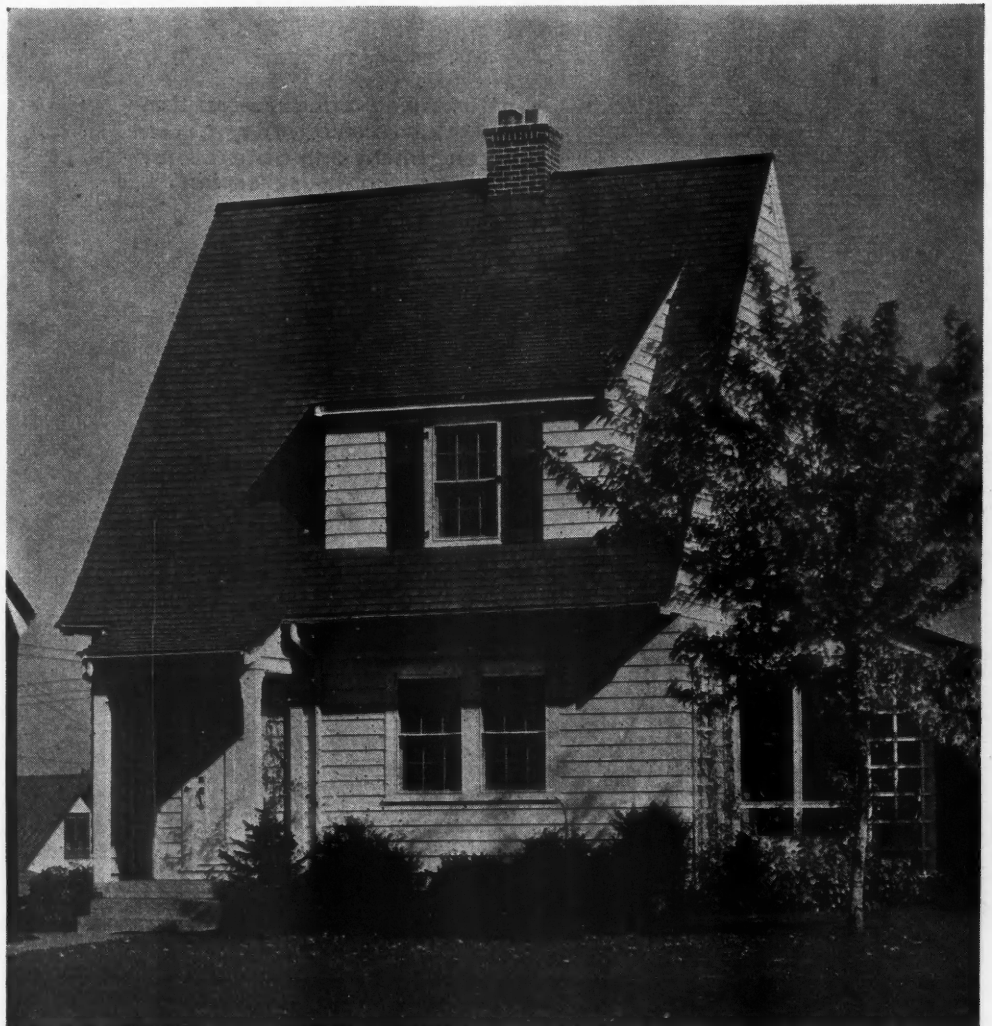
**Four
Best
Sellers**

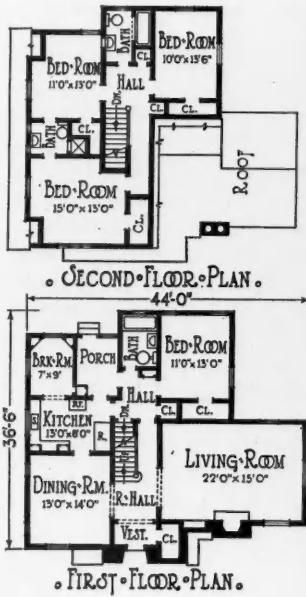
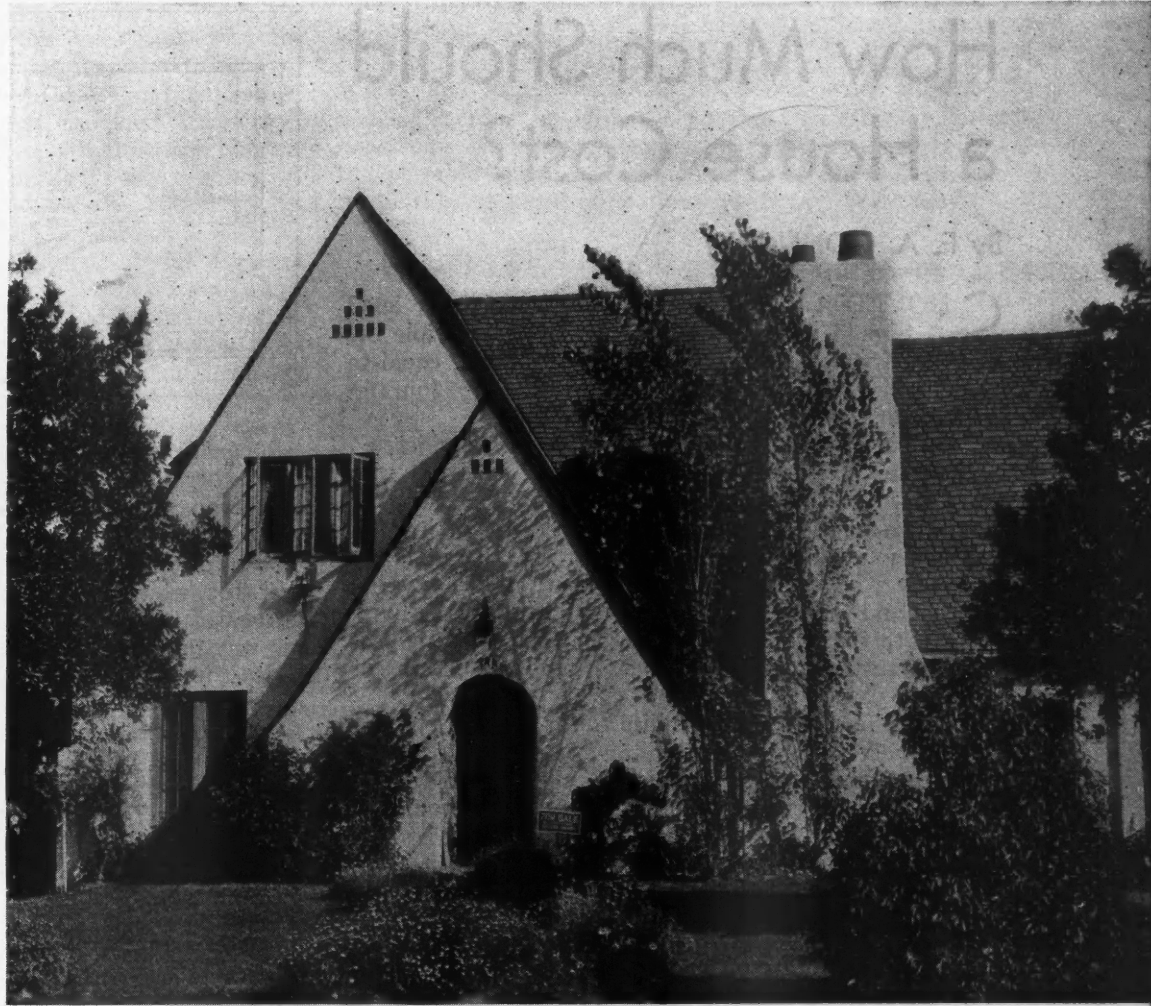


FLOOR PLAN

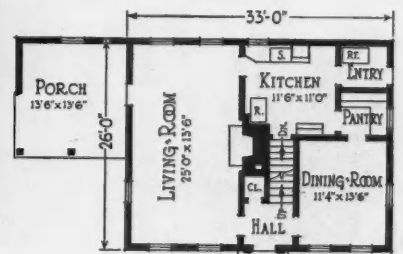
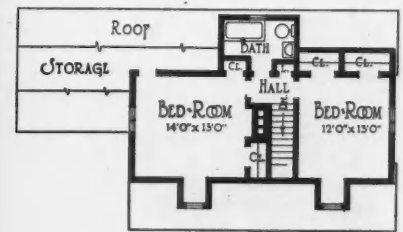
Interesting brick work is shown in this Illinois house designed by Zook & McCaughey. Cost Key is 2.245 — 234—2520—102 —30—39.

An efficient plan at low cost is the feature of the house at right (plan No. 5-A-43). Cost Key is 1.301 —96—568—25—15—13.





The English stucco home above is a type California builders are reporting to be more popular. Cost Key is 2.245-164-1335-55-25-27.



© Architect's Small House Service Bureau

This Colonial home in the Cape Cod manner (plan No. 5-G-1) is well liked in New England. Cost Key is 1.702-118-858-36-19-20.

How Much Should a House Cost?

By F. A. CONNOLLY

SHOULD it cost more than an automobile or less? Should what you spend on shelter be triple the bill for recreation, twice that for clothes, equal to your food cost? Should one dollar in every four go for housing, as it often does?

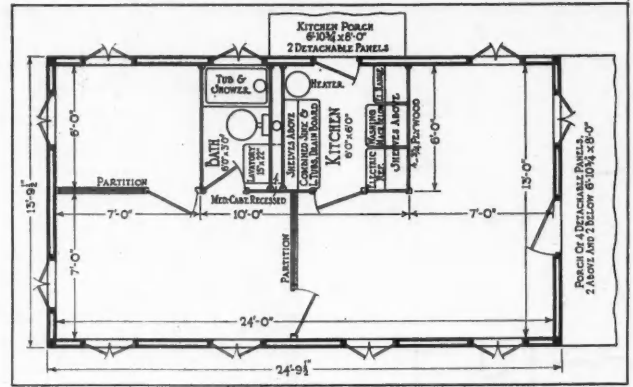
There are as many answers as there are families.

To some a house is a shrine, a place where all goes on that makes life really worth living, the scene of family festivals and hospitality to friends, in itself a constant source of pleasure and pride. To others a house is merely a service. It is a place to eat and keep warm, to sleep and change clothes. The less it costs, the more there is to spend on other phases of living,—on education, recreation, travel, clothes, stamp collecting, or what-will-you.

To the former, no expenditure for a home is disproportionate. To the latter, any expenditure is too much that exceeds the minimum for the service desired. To the home lover his greatest luxury is his home, to be sacrificed for and maintained at any cost. For him the possibilities outlined below have no charm. For those to whom the house is only one of many interests, equally important, the following sets forth how they may secure the most housing service for the least possible expenditure.

Housing service means more now than it did even a few years ago, and costs proportionately. A boxlike shell, inadequately stove-heated in winter, no longer meets the demand. Electric wiring, full plumbing, and furnace or boiler heat are matters of course, and insulation of walls, roof and floor is a big sales point. In many localities gas range and electric refrigerator go to complete the house, and full air conditioning (cooling) is just around the corner. The family that considers its house as a service nevertheless wants its feet warm and its drinking water cold.

How can these requirements be met at least possible cost? How can the excessive overhead for land values, real estate taxes, transfer fees, sacrifice sales, fuel costs,

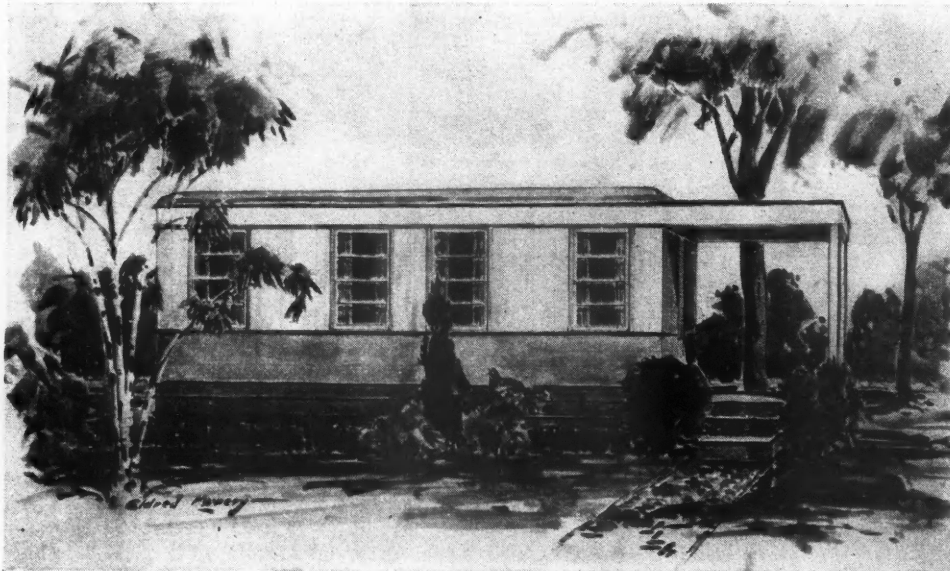


maintenance and repair, neighborhood obsolescence and many other contingencies be avoided or reduced? How can the apartment or tenement house dweller be made a prospective home buyer? There probably is no one answer to such questions, but the portable house, designs for which recently have been prepared by the National Lumber Manufacturers' Association, goes a long way toward providing the most housing service for the least money.

A Mass-Production Portable House of Lumber

The portable house is designed to be built under cover at some convenient point, sold in a showroom like an automobile, and hauled to the lot (owned or rented) on which it is to be situated. It is a one-story, flat-roofed structure, 13 feet by 24 feet inside measurement, with a service unit 6 feet by 10 feet, centrally located on one wall, for bathroom and kitchen equipment. This leaves a space 7 feet wide between the unit mentioned and the other three walls. The plan provides for two movable partitions 7 feet in length, by which this space can be divided at will into bedroom and living room space. These partitions are of $\frac{3}{4}$ " plywood, cased with a section which can be readily worked from a 2x4. This section provides a groove or rabbit in which the plywood is set and which is nailed to the plywood along its edges. A door frame is secured by running this casing at top and bottom past the edge of the plywood and by attaching stops to the inside of the dimension pieces used with the door frame.

The partitions can be attached at the floor and ceiling line and, if desired, at the edges to the surrounding construction by screws set in the bevel of the worked



LUMBER INDUSTRY'S PORTABLE HOUSE

Suggested floor plan (shown above) is 13 by 24 feet, affording all necessary living space and facilities for small family. Service unit, kitchen and bath, 6 by 10 feet overall. Heat by a 40-gallon hot water heater. Walls heavily insulated. Living space divisible at will by two movable (screwed-in) partitions 7 feet long, each with door. Exterior is modernistic box type with flat roof.

2x4's. In case it is desired subsequently to move the partitions to another location the holes caused by the screws can be filled with putty or plugged.

The house has front and kitchen doors and ten double-casement windows. Details are provided for simple porch panels, consistent with the architectural scheme of the house, which can be attached at any time.

No basement is contemplated, but the hollow spaces in floors, walls and ceilings are to be filled solid with insulation, resulting in warm floors and interior surfaces and a very low rate of heat loss. Windows and doors are to be weatherstripped, and the total hot water radiation of 105 sq. feet, required to heat the structure in very cold weather, can be supplied from an ordinary 40-gallon, hot-water heater, placed in the kitchen. The annual cost of heating the house through an entire winter with gas will range from \$40 in the climate of Washington, D. C., to perhaps \$60 in New England. The sheet metal roof, painted with aluminum paint, will still further reduce heat absorption in the summer.

No innovations in the way of special equipment or construction methods are involved. Floor and roof are framed with 2x6's; walls with 2x4's. Sash and doors are small, but of stock sizes. There is no problem that experienced building trades labor cannot meet readily. The floor joists are supported during construction on two 4"x8" built up sills, which rest in turn on the steel frame of the trailer during transit, and upon piers or posts set in advance at the site. Weight of the house, fully equipped is about six tons.

Costs of building this house in lots of several have been carefully estimated for the vicinity of Washington, D. C. The net actual cost of the structure, ready to move, is about \$1240. Provision of electric range, washing machine and refrigerator, screens for all windows and porches, a flagged walk and landscaping, increases this figure to about \$1600. An allowance of \$50 for extension of utilities from curb and \$30 for moving to site makes a total of \$1680. The cost of building in Washington is generally reported to be considerably higher than that now prevailing in the middle west, and it is believed that with the elimination of some of the movable equipment mentioned and where lots of 50 or more are built, the structure can be provided in place at a net cost of not more than \$1500.

The cost per month of providing this type of quarters may be estimated as follows, on the basis of a 12-year amortization.

Payment on principal @ 1%	\$15.00	per month
Interest on principal @ 6%	3.75	" "
Taxes, basis 80% val. @ 2%	2.00	" "
Ground rent, basis \$30 per year	2.50	" "
Insurance, repairs and maintenance, basis 2% per annum	3.00	" "
Total.....	\$25.75	

It is apparent that the original cost of such accommodations can be retired and a reasonable non-profit return realized on the investment at a rate of not more than \$30 per month.

The width of the portable house considerably exceeds the usual 8 feet to which users of the highway are limited without special permit. It is not too wide, however, to be moved readily along almost any city street or main country road, without completely interrupting traffic, and by arranging to transport it during the early morning hours there should be no difficulty.

Will people buy such houses or rent them? Only time and experimentation will tell. Hundreds of thousands of apartment and tenement dwellers get along with less space. Many pay twice \$30 per month for the doubtful privilege of a single room and bath behind a

liveried doorman and a marble foyer. Will the advantages of the portable house, with its economy, compactness and serviceability, its ready access to the open spaces, and its opportunities for home ownership outweigh "keeping up with the Joneses?" Perhaps. Perhaps not. Will young couples just starting out prefer the portable house and a month each year in Europe or Florida, to more pretentious quarters? Why not?

How I Learned a Valuable Short-Cut

By A. W. HOLT

Director of Service, Merchandising Council,
National Retail Lumber Dealers Association

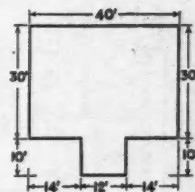
In previous articles I have explained the application of Cost Keys appearing with picture plans of houses in recent issues. This month, for instance, the plan on page 31 carries the Cost Key 2.133-162-931-40-26-17. The first number shows cost of the superstructure in relation to what is known as a Basic House. Most retail lumber dealers have or can get the material list for this Basic House and after a dealer has priced it, he can in a few minutes figure the cost of any house on which a Cost Key has been prepared. He can quote you his price of materials for these houses as easily as your tailor quotes you on a new suit.

The second number in the Cost Key shows that this particular house requires 162 lineal feet of foundation wall. The third number, 931, shows the number of square feet of floor required for a full basement—the figure for a full basement is always shown, regardless of what a plan may call for. The fourth number in the key, 40, shows cubic yards of excavation per foot of depth. The fifth number, 26, shows squares of outside wall and the last number in the key, 17, shows squares of roof.

The figure showing lineal feet of foundation wall brings to mind one of my most helpful estimating short-cuts, which I learned years ago, while in the retail lumber business, from a contractor with whom I worked very closely. He had brought in a school house plan on which he intended to bid.

I had helped him on numerous occasions, and he had shown his appreciation by giving me all his business. We were practically partners when figuring a job.

The contour and dimensions of the building he brought in were something like this:



This happened before I developed my first unit system of estimating. I ordinarily would not have started figuring the job immediately, but we wanted to know right away how much gravel would be needed in the foundation, so we could get a price on it while I figured the other materials.

I started to figure the yardage by computing the lineal feet of foundation, using the only method I knew at the time, which was to start with the 40 foot dimension in the rear and add each section of wall length as I came to it, thus: 40 + 30 + 14 + 10 + 12 + 10 + 14 + 30 = 160 lineal feet of wall.

My contractor friend watched me from the other side of the desk and evidently lost all patience with me; for he blurted out,

"Why A. W., you big fool"—and that's just the way he said it—"why don't you do it like this?"

He took the pencil out of my hand and set down the following figures:

$$40 + 40 \times 2 = 160.$$

What's worse, I didn't get his point immediately, so

(Continued to page 50)

Planning Service Helps Builders Sell Complete, Modernized Kitchen

By CARL M. SNYDER

Chairman, General Electric Kitchen Institute

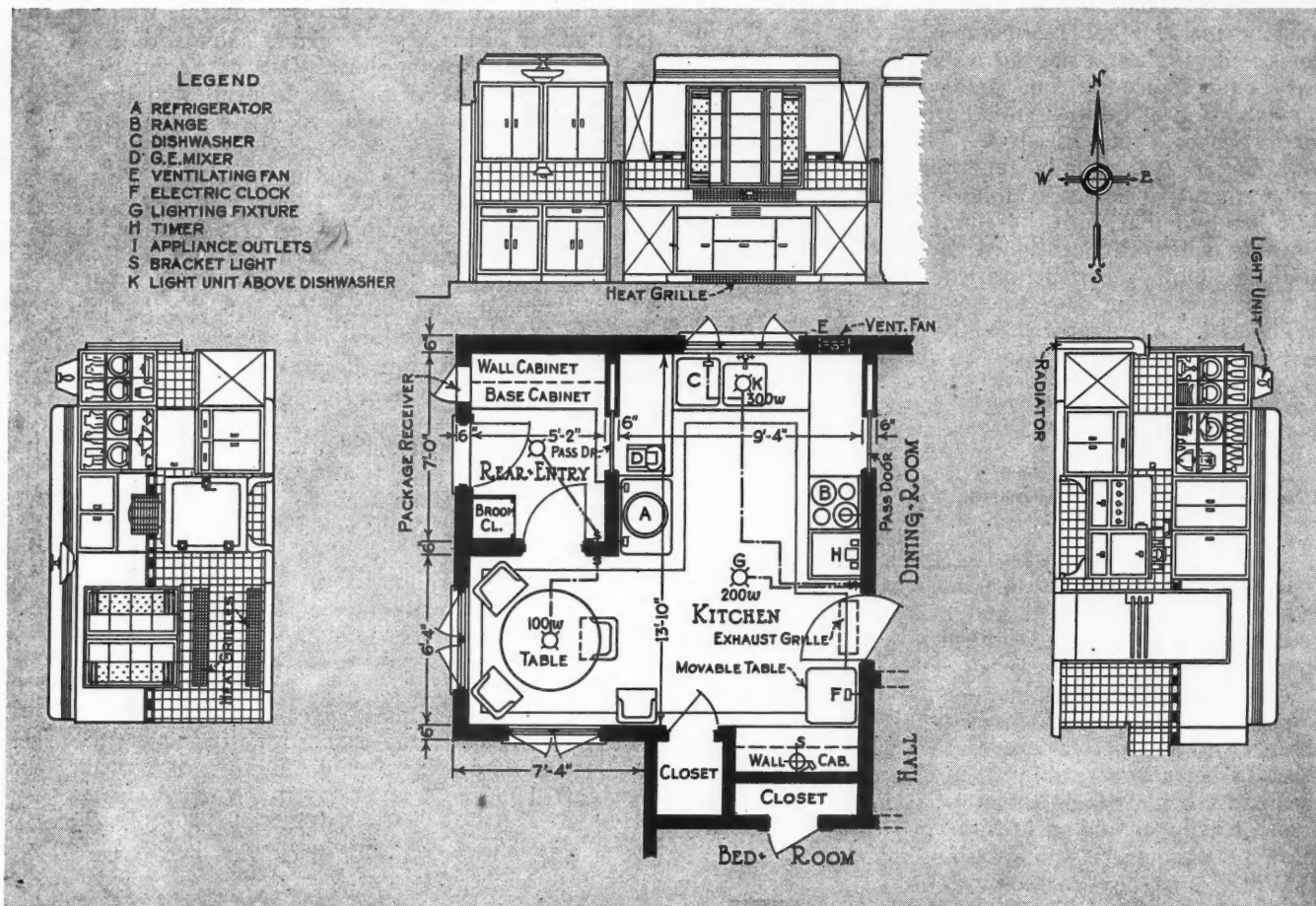
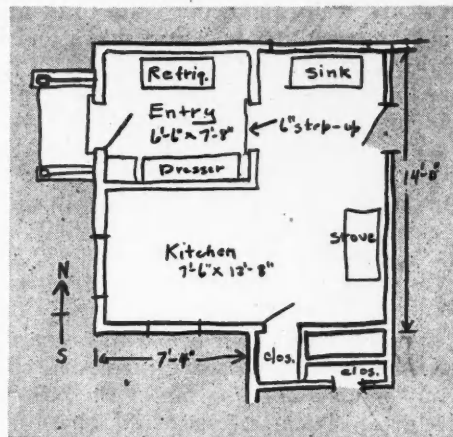
THE principle of unit selling, which is making such headway in the home building industry, applies with special success to the modernizing of kitchens.

By this I mean that it is easier and better for building professionals to sell the housewife on the idea of a complete, modernized kitchen, thoroughly up to date in every respect, than it is to try to sell her individual improvements or pieces of equipment.

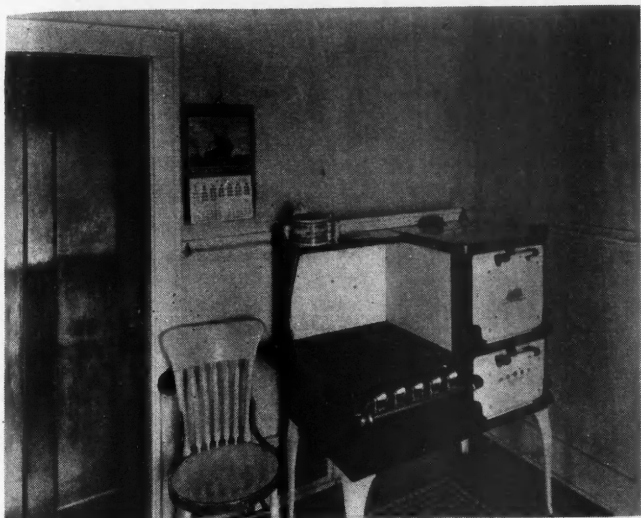
The contractor, or his salesmen, is able to visualize for the housewife the benefits of an entirely modern, labor-saving kitchen. Our experience in helping builders plan new kitchens and modernize old ones, has proved that selling the complete kitchen is the best method. It gives the building profession more work, it sells more building material and it sells more up to date kitchen equipment.

The General Electric Kitchen Institute was founded to further this plan of unit selling and to bring a new and unusually helpful service to builders. An architectural planning service is provided which brings the

talent and experience of the best kitchen designers of the country into the service of the building industry. Any builder interested in selling a modernized kitchen to a prospect can submit a rough sketch of the kitchen together with his idea as to what should be done to it. The Institute architects study this plan and then prepare complete working drawings in color for a modernized kitchen. Such a kitchen will be thoroughly scientific



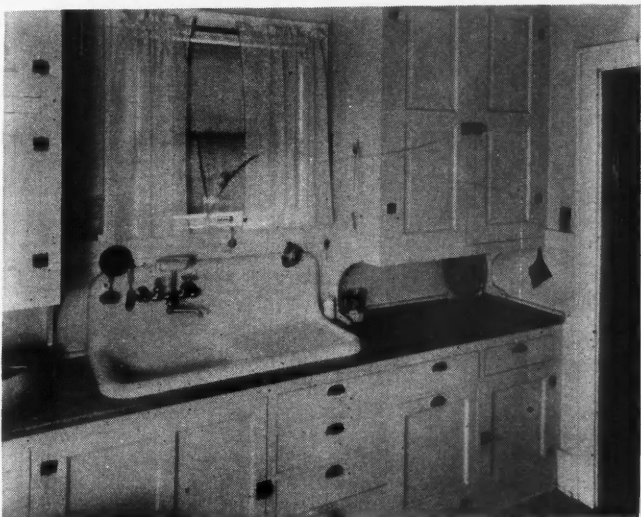
Typical example of a replanned kitchen, showing how efficiency can be increased. Data for this detailed drawing was given in builder's sketch above. The drawing was furnished in full colors as part of the free planning service of the Kitchen Institute for builders.



BEFORE—corner of the kitchen in a home at Glen Ellyn, Ill., before modernizing



AFTER—the same corner after the kitchen had been re-modeled and fully equipped



BEFORE—how the old sink and drain board looked, before the builder arrived



AFTER—the modernized kitchen, with electric dishwasher and stainless steel sink

and laid out so that no steps will be wasted by the housewife as she works.

Numerous builders and other building professionals have already taken advantage of this free kitchen planning service and are also profiting by the sales benefit a completely modern kitchen offers. One outstanding example is Walter A. McClatchy, a Philadelphia builder, who modernized and sold 53 foreclosed homes in one month, using an all-electric kitchen as his chief advertising feature.

The Kitchen Institute is not a sales organization. Its purpose is to bring before the public the manifold benefits of healthful, beautiful, efficient kitchens. Its expert planning service and advice are available to builders without charge.

Study of the sketch plans sent in to the Institute often reveals startling improvements that can be made with just a little rearrangement of the kitchen. The example shown on the opposite page illustrates this point and shows how an awkward, space-wasting kitchen was transformed into a really efficient work shop.

Another example of Institute planning is the modernized kitchen of Mrs. Fred A. Ramsdell of Glen Ellyn, Ill., shown above. A local building contractor working

in co-operation with the local electric appliance dealer, did the modernizing. This housewife was sold on the idea of a modern kitchen, even though the house she lived in was a rented one. An agreement was made with the landlord whereby he stood the expense of the painting and repairs called for. The renter purchased the equipment, and retains title to it. A two-year lease was taken, giving the renter the option of removing the equipment at that time if she does not wish to extend the lease.

Structural changes made were inexpensive, but made a considerable change in the appearance of the kitchen.

Equipment installed in the kitchen consisted of an electric refrigerator, electric range with clock, electric dishwasher with stainless metal top, steel cabinet with table top, stainless steel drain boards and back splasher, electric percolator, toaster and waffle iron.

The Institute is conducting a national drive to focus interest on better kitchens, and in doing so is creating work for the building industry. Contractors and builders are urged to take advantage of this kitchen planning service and send in sketches of kitchens that need modernizing or blueprints of kitchens being planned for new houses. The help of experts is offered free.

"TRASHY" ARCHITECTURE—The Menace to the Building Industry

By WILLIAM D. SAWLER
Morgan Woodwork Organization



A Typical "Nondescript" misnamed "English" a perfect example of WHAT NOT TO BUILD!

THE desire for homes, like the desire for any article of merchandise must be stimulated and encouraged continuously. In this way it is developed from "potential" into the act of buying which, after all, is the result the seller so earnestly seeks.

If that desire is to be satisfied it must culminate in the actual purchase. Before this happens there must be developed a powerful determination on the part of the individual actually to own, let us say, a home. He visits the attractive, well planned homes of his friends, he pictures his family in a similar home and then desire takes root. If it is fostered and encouraged properly this individual soon becomes a good prospect—then a home owner.

In this process, homes already standing and those being built play a vital part. If the prospect's desire is continually intensified and strengthened by seeing really fine homes of good, enduring architecture he will soon turn buyer. On the other hand, if he sees about him on endless variety of mongrels—nondescripts—homes lacking in beauty and individuality the desire may not even get a good start.

It is apparent that in the past many have been guilty, unintentionally it is true, of menacing the home construction industry by building or encouraging the building of homes of nondescript architecture. The hundreds of thousands of misfits standing today are doing more harm in destroying home owning desire than possibly any other single factor.

They are demoralizing the natural urge of every red blooded American to own his own home. The blight of their crude appearance is spreading to affect seriously the very industry which brought them into being.

When we realize the enormity of their offense to the

Destroying Desire for Home Ownership Among the Nation's Home Seekers—Dwellings of Misfit design seriously affect the Sales of Homes.



A Hodgepodge interior of inappropriate design lacking architectural unity and good taste—
AVOID THIS!

industry we begin to appreciate the damage done. Strangely enough there is no sane reason why these houses should have been built with so little regard for good design. These ugly, unwanted mongrels, with values made unstable by rapid depreciation, in most cases actually cost more than the homes of correct architecture.

Well designed homes are worthy additions to any community, a real delight to their owners and a tangible asset of good will to those who build them. The appeal of such homes lasts as long as the homes themselves and thus they always command a high resale value. They will always be in good taste, for their beauty is based not on a mere whim or fad, but on the sound fundamentals of all art.

This is always true of any work of art. The crumbling temples of Greece evoke more sincere praise by their beauty even in decay than most of the newest buildings

of our present era. Even in our own country many homes built in Revolutionary days still stand, to shame by their dignity—their simple beauty and harmony of detail most of the dwellings built in these years of “progress and advancement”.

One of the greatest needs of the industry today is a radical improvement in the architecture of the homes it offers the public. Over three years ago many in the architectural profession suddenly realized their duty to the industry and began to extend their services more liberally to the creation of better small home design. Many groups of prominent architects now are serving builders, lumber dealers and others in the industry with plans for small homes that are an inspiration to home ownership.

Builders have come to recognize that their part in the picture is that of building and are specializing more thoroughly on improved construction, leaving the architecture more and more to the architect who is best qualified to produce it. This is certain to make a vast improvement throughout the industry.

Having considered design, the next factor of importance is correct materials. Every home to be a complete ensemble, in good taste throughout, must be built of the proper materials—roof, hardware, flooring, exterior and interior woodwork, etc. When every contributing factor is in harmony the complete result cannot help but be harmonious—in good taste.

The two homes shown on this and the opposite page are visual proof of the comparison between the so-called mongrel and the house in good taste. The one to the left marked “Obsolete” is all of that. Comparatively new, it is as out-of-date and obsolete as yesterday’s newspaper, and is a drug on the market. Notice the conflicting elements in its exterior design. The result is a home that produces a most distressing impression. The average layman, untrained in architecture senses the deficiencies of this house although he may not be able definitely to put his finger on any fundamental reason for its lack of appeal.

(Continued to page 52)

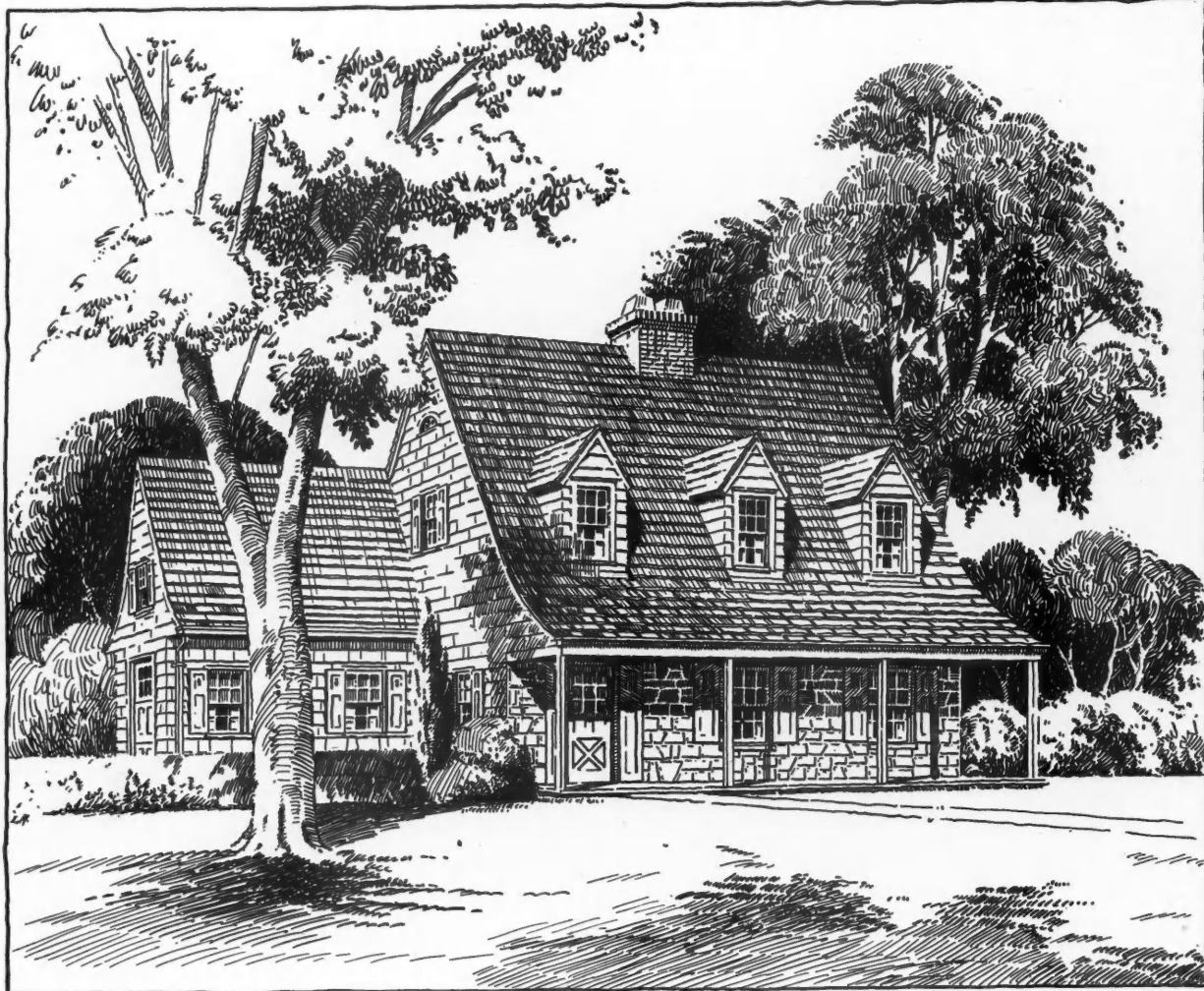


A correctly designed home of English tradition that will always be in good taste



An appropriate interior for the English house shown above. Note the true English woodwork detail, plank floors and characteristic English fire place

THE ARCHITECTURALLY CORRECT HOME MUST HAVE UNITY AND HARMONY THROUGHOUT BOTH INTERIOR AND EXTERIOR :: NOT ONE DETAIL CAN BE OVERLOOKED LEST IT RUIN AN OTHERWISE PERFECT ENSEMBLE.



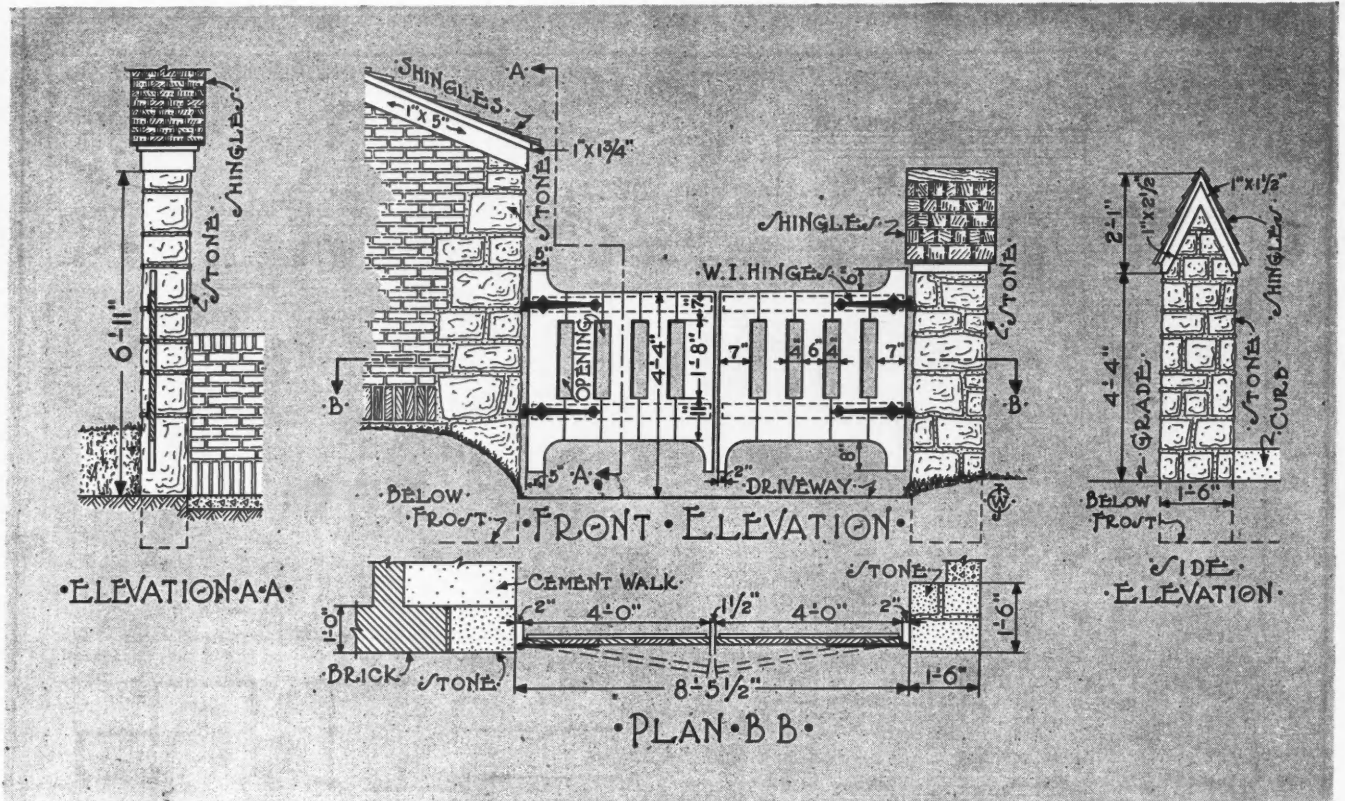
THE HOUSE OF THE MONTH

Six-Room Design in Stone and Shingles

WILLIAM CAIN, Architect
THE HOMELAND CO., Builder

Cost Key 2.133—162—931—40—26—17.

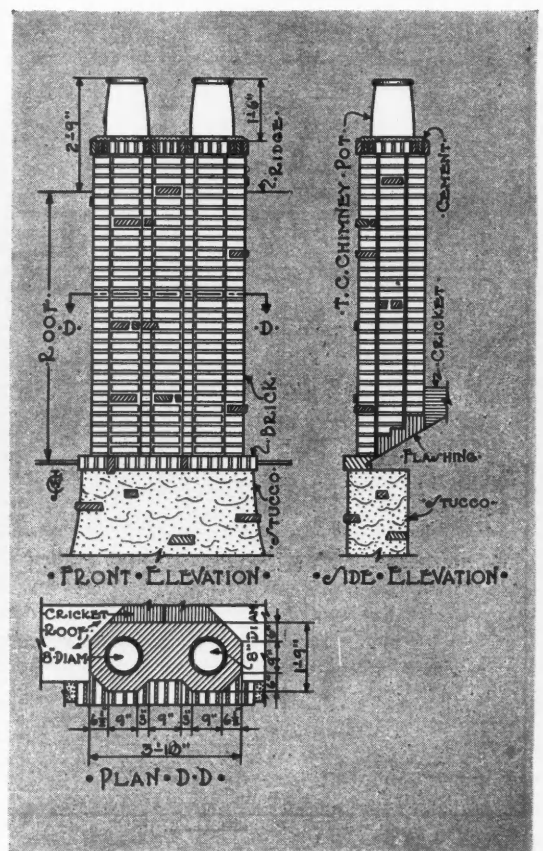
A REMARKABLE degree of hominess is given in this Early American home of six rooms and attached garage. It is broad and ample in exterior appearance, the projecting wings for garage and dining room giving a total width of 53 feet. The house proper, however, is not large, measuring 29 feet, 6 inches by 28 feet. Covered with wood shingles with a wide exposure, the front elevation is reinforced with stone in the typical Pennsylvania manner. This stonework is under the roof extension for the front porch and similar stonework makes the flagstone floor of this porch a treatment which is cool, clean and full of character. The arrangement inside is quite conventional with entrance into a vestibule and stair hall adjacent to the living room. This is a room of fairly good size with a big stone fireplace. The dining room, breakfast alcove and kitchen, together with the motor room, complete the ground floor layout. Upstairs are three bedrooms, two baths and three very large closets. The ceiling heights are kept low, 8 feet, 6 inches for the ground floor, and 8 feet for the second floor. Three well designed dormers add interest to the front elevation. Window shutters add to the old time, homey appearance. A rugged square chimney tops the design with a note of strength.



The detailed drawing above and the photograph below speak for themselves. How the gateway looks, and how to build it are clearly shown. This is an addition that will improve the appearance of either a new or an old house



Measured Drawings of a charming Colonial Gateway



Details of chimney pot HS for English cottage pictured on opposite page

New Welded Roof Truss Design is One-Third Lighter

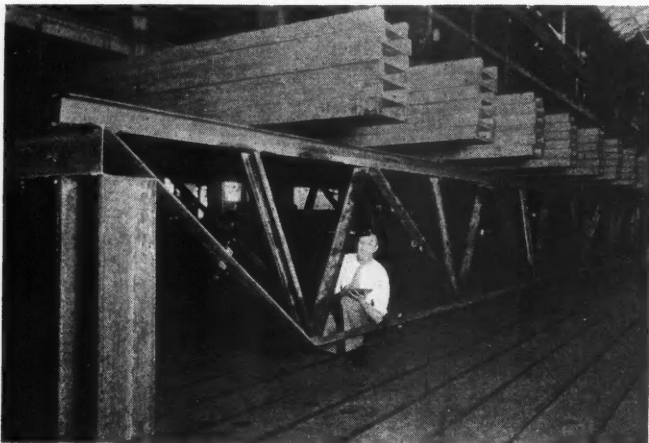
PROBABLY the first radical change in truss design within the last ten years is represented by the welded roof truss consisting of continuous tension straps as shown in the accompanying picture. This new type of truss, developed by J. E. Webster, General Works Engineer of the Westinghouse Electric and Manufacturing Company is being used in a new building at the Company's Derry Plant. This building will require ten of the new trusses with a fifty-two foot span, and thirty with a thirty foot span.

In another specific case, a truss designed according to the best known present welding standards, already a saving over riveted construction, would weigh 3700 pounds. The new design for the same load would weigh 2380 pounds, a saving over the former welded design amounting to 35 per cent. The welding and assembly on the new design is less than that required on the older designs. This saving in weight is effected by designing the truss so that all members have uniform stress.

In construction the truss is an expansion of the king-post principle. The 52 foot truss is composed of an upper compression member, three continuous tension straps, and twelve short struts, fabricated by combination butt and fillet welds.

The struts are welded to the top cord at purlin points and converge in pairs at the bottom cord, thus forming six isosceles triangles. The six diagonal tension members and the bottom cord of the truss (also tension members) are made from three steel straps. These straps, the ends of which are welded to the top cord at corresponding points on opposite ends of the truss, run diagonally downward and inward to the point of convergence of the two immediately adjacent struts, and then along the truss in the plane parallel to the top member, thus forming the bottom cord. This method of running continuous tension straps to corresponding points on opposite ends of the truss automatically increases the cross sectional area of the bottom member in proportion to the load which it carries.

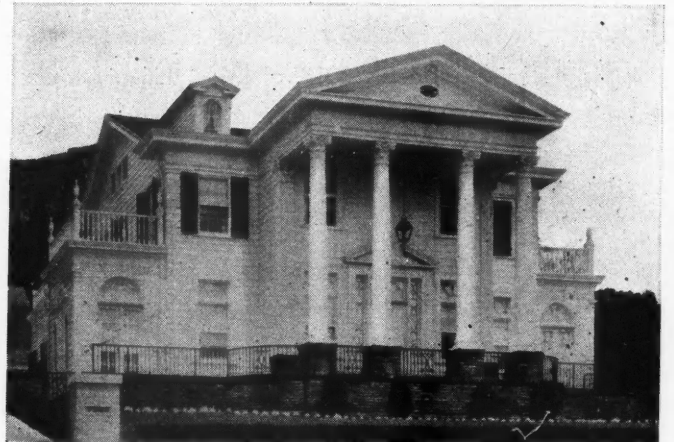
A pair of the trusses were subjected to full load tests, as illustrated, until the load of 39,600 pounds per truss was reached. A close relationship between calculated and measured stress was shown and much valuable information on behavior of trusses under full load obtained. Few roof trusses are tested so thoroughly.



Testing a 52 foot section of the new welded truss with a load of 39,600 pounds per truss



How the old house looked before Mr. Holloway convinced the owner it was worth modernizing



This is how the house looked after \$12,000 had been spent in making it thoroughly modern inside and out

\$12,000 Modernizing Job Increases House Value \$30,000

THE problem confronting C. S. Holloway, Los Angeles architect and builder, was to take an old-fashioned, twenty-year-old residence, which could not be rented, and transform it into a modern home suitable for occupancy by a wealthy client. By combining architectural planning and building supervision Mr. Holloway was able to do the entire job including erection of a large garage and servants' quarters at the rear for only \$12,000. The estimated increase in value of the house was \$30,000.

One by two inch vertical strips, sixteen inches apart, were laid over the old exterior of shakes. New siding of colonial California redwood was nailed to these strips.

The chief structural change consisted in addition of the large colonial portico with imposing classic pillars. Although extensive alterations were made inside, the foundations and main body of the house were untouched. The roof was not changed as the old shingles were in good condition.

Much of the exterior classical trim, including the cornice and dormers, was made of galvanized iron formed in the shop but put together on the job. It was estimated that at least \$90 was saved by this method on the cornice alone.

To meet modern needs, the interior alterations were extensive. The living room was enlarged and beautified

by a charming colonial fireplace at the end; the floor was lowered 18 inches. The music room was transformed and enlarged, involving removal of structural supports which called for the insertion of a steel beam. This transfer of load made it possible to erect a fine colonial staircase, which added much to the beauty of the room. Walls were decorated with a high quality washable fabric covering finished in silver and gold.

The dining-room was enlarged and kitchen reduced in size. Baths and new closets were provided. The small office and library at each end of living room were especially attractive features desired by the occupants.

A small but clever advertisement in the telephone book brought in the job, which was accepted on a basis of 15 per cent of total cost of work. The entire project including landscaping was done in ninety days.

Air Conditioning Proves Good Small Home Sales Argument

DURING the past year the Milwaukee firm of A. L. Grootemaat has been successfully selling homes of moderate cost equipped with thoroughly modern air conditioning apparatus. According to E. H. Grootemaat, not since the adoption of inside sanitary plumbing facilities has there been such a major improvement devised for the home.

"Our firm is enthusiastically sold upon the principle of air conditioning," he states. "If we were to compose a theme song for promotional purposes we would entitle it 'The Air We Live In.'"

The Grootemaat-built homes are modern and substantial in every way. The primary functions of the heating and air conditioning system which is the leading selling argument used are:

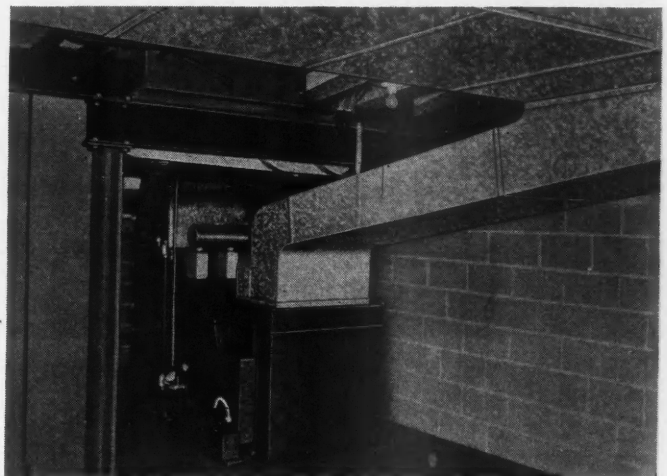
1. Proper heating of the home during the months when heat is needed;
2. Maintaining adequate humidity for health and comfort;
3. Filtering and washing all the air in the home, removing dust, odors and bacteria from the air;
4. Gently circulating the heated and conditioned air, by means of an adequate blower and correctly designed system of ducts, to every corner of every room;
5. Summer cooling, if desired, by circulation of cool air drawn from the basement, and when outdoor



E. H. Grootemaat, Milwaukee realtor-builder, who reports air conditioning a big help in selling small homes



One of the air conditioned small homes Mr. Grootemaat has been erecting and selling in Milwaukee this year



A view of the air conditioning system in the basement. A gas fired furnace, blower, washer and filter are provided

humidity is low, by means of the air washer. These facilities may be provided, in whole or in part.

Progress in air conditioning equipment the past year has been rapid. The type used by Grootemaat is fully in step with progress. Units performing whatever function of air conditioning the client demands may be provided. In addition to those described above, this equipment is also adaptable to the addition of dehumidifying and refrigerating equipment.

The advantages of air conditioning are described by E. H. Grootemaat as follows:

"Radiator-in-the-room types of heating systems are encumbered with limitations and undesirable features which builders have long sought to overcome. Among these are the robbing of valuable space in every room; interference with interior decorations; the setting up of dirt laden air currents, by which dirt is deposited on walls, decorations, and in the respiratory systems of the occupants. Insufficiently moistened air in homes is recognized by the medical profession as the cause of many human ailments.

"Complete air conditioning meets the need with which builders have long been faced. The filtering, washing, humidifying and forced circulation of the air remedies all the defects of the old type radiator system.

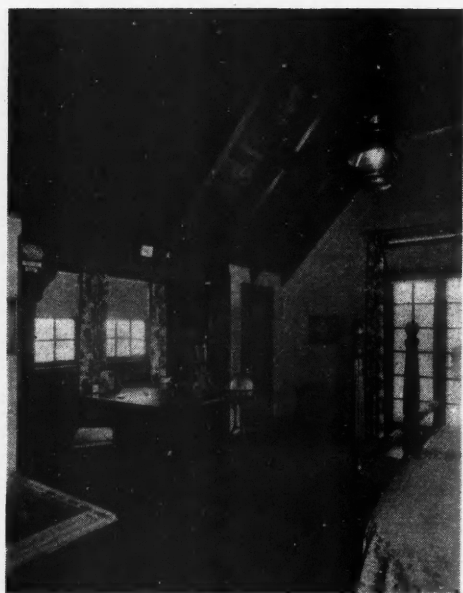
"Our clients are very grateful to us for providing this type of equipment in the homes we build."



Unusual treatment of the panelled walls and beamed ceiling give this Colonial room a distinctive but pleasant air.



Pine in narrow panels, natural finish, gives this room charm.



Boy's bedroom with beamed ceiling.

**Panelled walls
and ceilings in
three interiors**

New Home Products—New Builder's Equipment

Many new and improved materials announced as business prospects brighten. For further information on any item write American Builder, 105 West Adams St., Chicago

NEW OIL FURNACE—Of unusual interest to builders is the new, compact, strikingly complete electric oil furnace produced by a national manufacturer of electrical equipment after years of research and illustrated at right.

Radically new and efficient heating principles are embodied in this oil burner. In the first place, it is a complete unit including burner, boiler, hot water heater—all combined into one unit ready to connect to the piping, and all encased in a shining enameled insulated case. The furnace will serve hot water, vapor or steam heating systems, and with an additional unit, an air conditioning warm air heating system.

Designed for use in homes, the boiler brings to domestic heating the efficiency of the Scotch boiler and down-draft combustion widely used in power boilers. Oil entering at the top is projected downward in a fine spray, is ignited by electric arc electrodes and kept burning some distance below the burner nozzle by air from above. The whole furnace is heavily insulated and entirely automatic.

So revolutionary is this new heating unit that it is possible only to summarize the technical features. These include:

Operation is entirely automatic. An all-electric thermal control is housed in the upper part of the unit.

Hot water for domestic use at low cost all the year around. The automatic hot water heater is part of the furnace, is entirely automatic and low in cost.

Low cost to operate. Uses a cheaper grade of fuel, the full benefit of which is extracted by the scientifically designed boiler and burner.

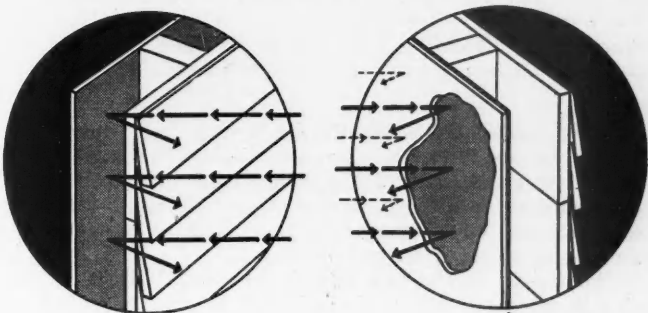
Quiet operation, secured by progressive combustion which eliminates the "blow torch" action which produces noise. Also acoustical insulation.

Cleanliness is absolute. The entire unit is enclosed and soot, odors, oil vapor are consumed. Even the smell is burned. The complete unit carries a long term guarantee.

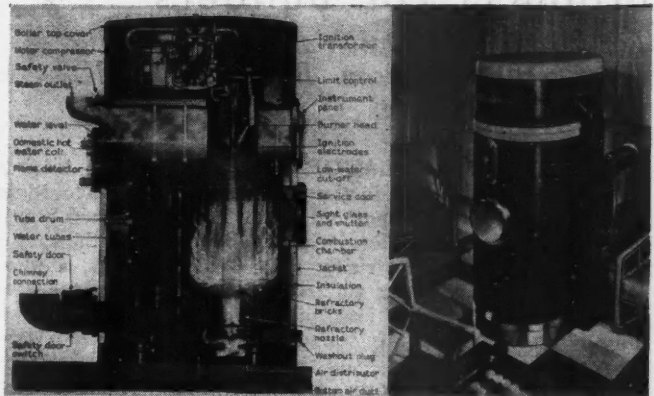
FIREPROOF INSULATING BOARD—Making use of a new principle in insulation, a national manufacturer of a well known line of gypsum wallboard has put on the market a new product of unusual interest to builders at this time. This new fireproof insulating product is a 3/8-inch gypsum board of standard make and size to which has been added a thin layer of aluminum foil. This surface is actually metal. It permits the gypsum board to retain its present qualities and adds the new principle of insulation. According to tests submitted by the manufacturer, addition of this layer of aluminum foil provides extra insulation equal to that of half an inch of standard fiber insulating board. The new product is thus a good fireproof wallboard plus insulation.

As illustrated in the accompanying diagram, the layer of foil stops summer heat by reflecting it back as a mirror reflects light. It stops winter heat by refusing to emit it into the air space between studs.

Many uses for the new insulating gypsum board are out-



How the New Insulation Works in Summer (Left) and Winter (Right).



Boiler, Burner and Hot Water Heater Are Combined in One Compact, Good-looking Unit in This New Oil Burning Furnace.

lined. In residences, summer cottages, attics, garages, etc., it will meet an important need. The combination of advantages presented by the new product solves an old problem—the need for a material to provide unit construction, that insulates, and that will take any decoration.

METAL SINKS—The growing trend toward the use of cabinet sinks in large as well as small kitchens has resulted in the development of a line of monel metal models in ten different double drainboard and one single drainboard sizes by a large producer.

In style, the new cabinet sinks are straight line, self supporting and are made of heavy gauge metal reinforced with heavy plate under the drainboards. Under portions, including bowl and drainboards, are backed up further with sound deadening material.

Bowls are of solid one piece construction. Drainboards are without flutes to provide the maximum in working surfaces and have an integral back splash 1 1/2 inches high. End and front rims protect the floor from water splash. Finish of the cabinet sinks is of silvery satin.



The Silvery, Non-Rusting Metal Sink Such as Is Illustrated Above and Below Is Growing in Popularity.



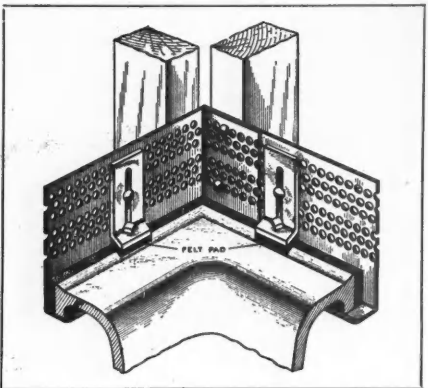
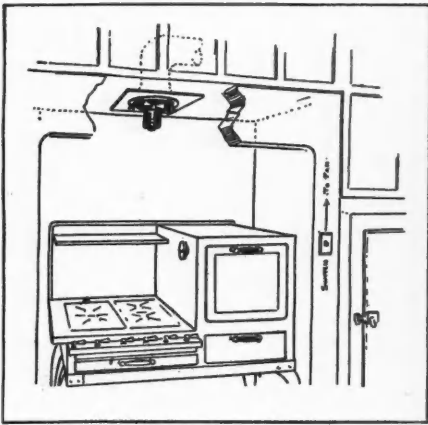
New and Improved Products For Builders

For further information about any of these items write American Builder, 105 W. Adams St., Chicago.

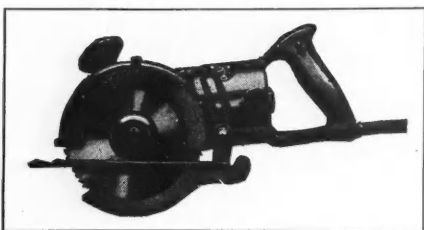
KITCHEN VENTILATOR—A well ventilated kitchen is an absolute necessity in the modern home, and according to a firm that has just put out a new line of kitchen ventilators, the best location for such equipment is over the range.

To properly trap the rising grease-laden vapors, a plastered canopy or arch or an arched recess is desirable. An electric motor operated fan quickly removes the objectionable odors. Equipment is sound deadened to prevent vibration. Assembly includes substantial metal canopy, electric light, exhaust head, motor and fan. Installation is very simple as the equipment is light in weight and does not require wall reinforcement.

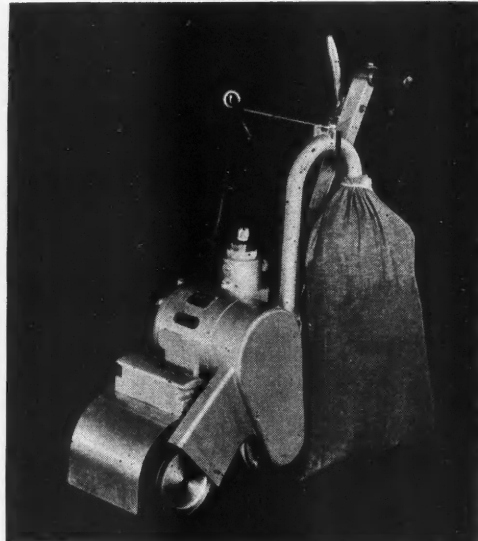
Advantages include: greasy deposits on kitchen walls are prevented; a clean sweet house is assured; ventilating over the range spares the person of the operator; unhealthy products of combustion from the gas ranges are removed; heating scheme is not interfered with; low first, and operating cost.



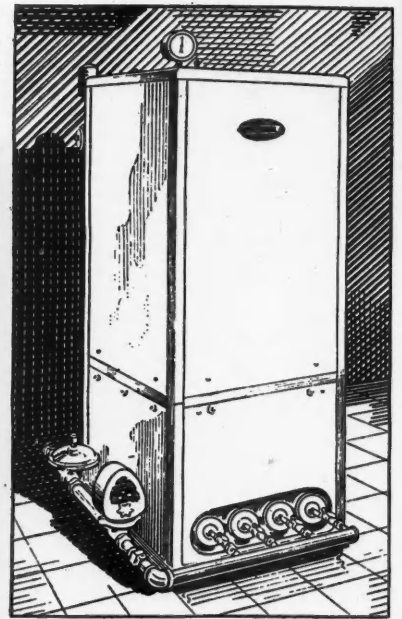
NEW BATH BRACKET—This bracket is adjustable and easy to use. Special clamps keep corner tubs from tilting. Felt pads protect the enamel. A practical and time saving device that greatly simplifies setting a tub.



A New Saw Priced Very Low to Meet a Wider Demand.



A More Powerful Motor Speeds Up the Performance of the Floor Sander Below.



New Design Principles Make This Gas Fired Boiler a Rapid Heater.

At Left Above Is Shown Installation of New Ventilator.

At Left Is New Adjustable Bath Bracket.

IMPROVED FLOOR SANDER—Just introduced by a well known power equipment manufacturer is a new type improved floor sander which is said to be a distinct improvement over the former eight-inch machine put out by the company. The last word in performance and production in an eight-inch machine is achieved by improvements in the power unit and method of driving.

A 1½ h.p. motor is mounted on a frame no larger than formerly used on the 1 h.p. machine. The extreme outside point on the right hand side of the motor is only ⅞ of an inch outside the edge of the drum. On account of the narrowness of the arm, the drum can sand right up to the quarter-round without the arm touching the baseboard. This major improvement makes possible unusually close sanding and saves considerable time by practically eliminating hand scraping at the edges, except at the butt ends of the floor.

Other improvements include a better vacuum dust removal system, refinements in drive and pulley construction, a lighter motor through use of aluminum frame, new patented paper locking mechanism, shock absorbing springs and a statically and dynamically balanced drum.

QUICK ACTING GAS BOILER—Entirely different principles of design and new features of construction make this new gas fired boiler able to turn instant heat in the boiler to almost instant heat in the radiator. In less than a minute from the time the thermostat turns on the gas, this new boiler speeds steam to the radiators. With cold water at 50 degrees, steam can be raised in ten or twelve minutes. Outstanding features of this new boiler include: double water tubes to cause quick steam; less water to heat—only 2.3 gallons; gas heat is concentrated full force on the shallow bottom header which causes rapid circulation up the thin section water columns; steam is created almost instantly and the water circulates rapidly; heat is uniform and produced economically; boiler is noiseless at all times, is of all-steel construction and is quick and easy to install.

LOW COST POWER SAW—A new light duty power saw to further reduce sawing costs to the building industry is the latest contribution of a midwest manufacturer. Without reducing quality in any way and, in fact, increasing efficiency and effectiveness, this manufacturer is putting out a new saw to retail under \$40.00.

The weight of the saw is eight pounds. It is of die cast aluminum frame, has a six-inch saw blade, 1⅞ inch depth of cut, and is operated by a ⅓ h.p. motor. This is a strong, fast, light weight saw made by a company that has some 54,000 electric power saws in distribution today.

WEATHERED CYPRESS SHINGLE—A new tapered asbestos shingle that is textured like natural wood, yet is ageless and fireproof, is now being produced by a leading roofing manufacturer.

The new shingle is of asbestos cement and is of built-up construction to give added strength and resilience. Extra thickness is at the butts where it is most required. A double set of nail holes permits the use of irregular shingle courses which further emphasizes the deep shadow lines of the heavy butts.

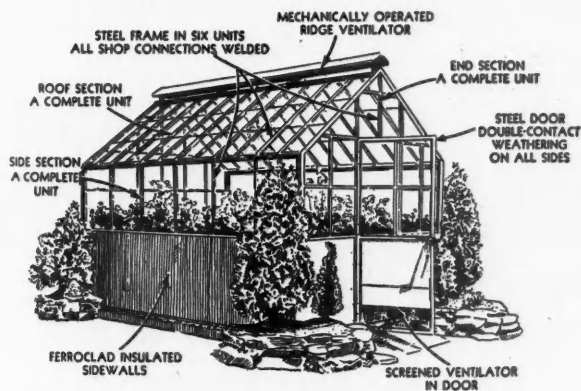
The shingles come in five mellowed wood colors of lasting beauty. Weight is only 500 pounds per square which does not require the use of extra heavy timbers to support the roof load. The new product is especially suitable for Colonial or Early American architecture.



Asbestos Cement Shingle Looks Like Mellowed Wood.

A GARDEN IN WINTER—This is the ideal time of year for builders to sell garden lovers a new type of "winter garden" just announced that will provide a place for growing things all winter.

The new structure is of glass and steel, sturdy and permanent. It is shop-fabricated with the ends, sides and roof sections ready for quick erection. The low cost includes everything. There are no extras. The copper-bearing steel is painted with fine protective aluminum paint and heating economy is assured by the steel-covered, insulated walls that retain heat even in the coldest weather. Other features include: large glass area, mechanically operated ventilator, double-contact weathering around door.



A Selling Specialty for Builders Is This Popular Small Green-house.

New Conduit Simplifies Placing Outlets Wherever Needed.

LOOSE FILL INSULATION—A midwest manufacturer of chemicals and insulation products has recently announced a new loose fill house insulation made from Vermiculite, a mineral obtained in Colorado which tests have shown to have high insulating qualities.

According to tests conducted at Armour Institute for the manufacturers, this loose fill product has a thermal conductivity of .37 to .39 B.t.u. per inch in thickness.

Features of this new product are its high insulating value, vermin proof, not permanently affected by moisture. It is light in weight, clean and easy to handle. The weight is approximately 10½ pounds per cubic foot. It does not dust and is easy to apply because it is so light in weight and is very free running, so that it can be put into very small places.

According to the manufacturers, this new product can be installed in homes at a very low cost. They offer as a rough estimate that a three-inch thickness to cover approximately 1,000 square feet should cost the consumer about \$100.

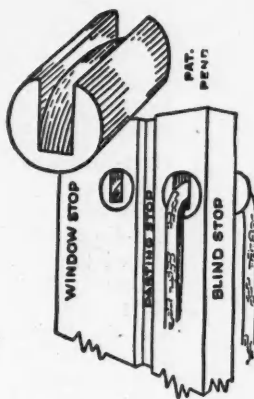
AUXILIARY GAS BURNER—A new auxiliary gas burner has been announced which is installed and operated in connection with the present warm air furnace. In this manner, a home owner can have automatic gas heat during about 80 per cent of the season, at low cost. During the comparatively short period of extremely cold weather, the coal furnace is used.

The new gas burner may be operated either alone or with the present warm air furnace. It is of high efficiency and economical in its use of fuel. A low speed fan, especially mounted to prevent noise, furnishes draft.

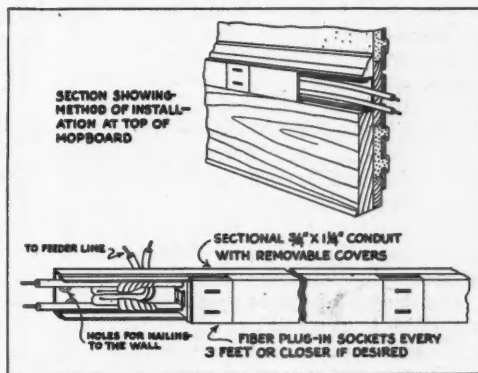
Other features include automatic damper control, exclusive draft control, gas pressure regulator, automatic safety pilot control, rustproof and baked, crystalline finish.

FOOL PROOF SASH CORD SADDLE—A new and surprisingly simple device for builders is the sash cord saddle just announced by a specialty manufacturer. This is made of select birch, treated in oil, and thoroughly kiln dried to eliminate shrinkage. It uses standard cord, and the shipping weight is only three pounds per hundred.

To install, the builder simply bores a one-inch hole, drives the saddle in. The cost of high priced mortising labor is eliminated. The new sash cord saddle makes possible smaller and lighter weights, causes less strain on the cord, saves labor in installation and requires no oiling. There are no flanges on the sash cord saddle to cut the cord and it has no moving parts to get out of order and no iron to rust.



Sash Cord Saddle Simplifies Window Construction and Reduces Cost.



OUTLET EVERY 3 FEET—Plenty of electric outlets without unsightly, dangerous extension wires are recognized by architects and builders as what the present day housewife desires. A new multiple outlet system has been perfected which is the complete answer. In this new system, a sectional conduit of zinc coated steel, ¾ by 1¼ inches, extends around the room as part of the baseboard assembly to carry the wires. Every three feet a fiber plug-in socket is installed. Snap-on covers three feet long cover the conduit between the fiber outlets. If outlets closer than three feet are desired, it is an easy matter to saw the cover to the shorter length. In fitting the conduit to the length of a room, a hack saw is used. Stock corners are provided so that the system can be run completely around the room. Feeder lines are brought in from the back through punch-out openings.

For banks, offices, display rooms, institutions and commercial establishments, this new system provides needed outlets for any service. The conduit is run at the floor line, at desk height or up at the ceiling line, whichever is preferred. Finished with the other trim or to match the walls in color, it is inconspicuous, safe and efficient.

NEWS—building activities of the month

States Rush to Pass New Housing Laws

A NATION-WIDE movement by states is under way to take advantage of the financing offered under the Emergency Relief Act recently passed by Congress to provide self-liquidating low cost housing and slum clearance.

Five states have called special sessions of their legislatures to consider housing laws permitting limited dividend corporations for low cost housing to be regulated by state and municipal laws. These states are Illinois, Massachusetts, Ohio, New Jersey and Alabama.

Under the wording of the Emergency Relief Act, the state of New York is the only one permitted to borrow funds, as it is the only state that has a housing law which meets the requirements of the Act. New York has already applied to the Reconstruction Finance Corporation for \$150,000,000 for slum clearance, and this perhaps accounts for the rush by other states to pass suitable housing laws to make them eligible for loans before all the money is gone.

Considerable attention has been focused on the Illinois housing act which is now before the state legislature and has passed its third reading. It is predicted that this law will be passed in the near future and will permit slum clearance and low cost housing operations to get under way in Chicago where the need is greatest.

That there is a real need for this type of housing is generally conceded. Immediate construction of a considerable number of such products would do much to stimulate the building industry during the coming months and alleviate unemployment. In addition, this type of public work has the advantage of not creating any increase in taxes, since all of such projects are to be on a self-supporting basis.

The danger of too hasty action in passing state housing laws which may not prove thoroughly satisfactory is voiced by the National Association of Real Estate Boards. Through its Housing Committee of which Edward A. MacDougall of New York is chairman, it has asked the Reconstruction Finance Corporation to be guided by the following principles in any large scale lending for housing loans:

First: That there is a reasonable need in the locality for the housing.

Second: That the land be subordinated to the government loan.

Third: That the plans for construction make adequate provision for light and air, and that sanitary and construction provisions be in accordance with up-to-date specifications and requirements.

Fourth: That the rent for the rooms be established at that prevailing in the neighborhood, and from the gross expenses there be the following deductions:

1. Operating expenses.
2. Taxes.
3. Interest on the government loan.

It further suggests:

a. That all surplus income above these amounts, after allowing a small reserve for contingencies, be returned to the government as a repayment

upon the loan for a period of 10 years or until the government loan is reduced to 50 per cent of the value of the land and building, it being understood that as and when economic conditions permit, the property will be refinanced and the balance of the loan returned to the government.

b. That the cost of the building include the labor and material entering the same, all insurance and liability costs, interest and taxes during construction, cost of supervision, architects' fees, and a fee of 5 per cent to the builders.

Mortgage Men to Meet—"Mortgage Banking in the Reconstruction Period" will be the theme of the Mortgage Bankers' Convention to be held at Niagara Falls, N. Y., Oct. 11-13. Speakers will include James C. Stone, J. J. Hopkins, Hiram S. Cody, Graeme Smith, F. P. Bennett, Jr.

Truck Maker Boosts Builders—"Build Now—at Lower Costs" is the heading of a full-page advertisement in colors being used in magazines throughout the country by the International Harvester Company. Advantages of starting work now are strongly presented.

Non-Rusting Rivets—A method has been developed whereby the individual units of riveted steel structures may be hot-dip galvanized before assembling, joined together by riveting in the usual manner (using the ordinary uncoated rivets), and the exposed rivet-heads then sealed off from the weather after the entire job is assembled in the field, says the American Zinc Institute.

This method of preventing rivet corrosion opens up the possibility of using galvanized structural steel in the fabrication of bridges, towers, roof trusses, and many other steel structures exposed to the weather.

Sales Director—H. F. Harper, president of the Motor Wheel Corporation, Lansing, announces the appointment of M. F. Cotes as sales director of the corporation's Heater Division, manufacturing the MW Oil-Burning Utilities.

Arco-Petro—An arrangement has just been concluded whereby the American Radiator Company will manufacture for the Petroleum Heat & Power Company a special boiler which Petroleum Heat & Power Company will sell assembled with their Petro-Nokol Burner as a complete Boiler-Burner Heating Unit, under the trade name, "Arco-Petro".

Prize Winners—Awards in the nationwide architectural contest conducted by Douglas Fir Plywood Manufacturers were based on two considerations: the attractiveness and good taste of the design itself, and the extent to which it adapted the natural advantages of Douglas Fir Plywood—large sizes, split-proof and warp-resistant strength, and low surface-foot cost.

"The most striking fact emphasized by this contest," commented G. L. Bartells, "is the extent to which architects in every section of the country now recognize not only the economy and damage-proof strength of Douglas Fir Plywood, but also its versatility."

The winners were: Class I, Attic Bedroom—1st prize, \$150.00—Chapman & Frazier, Boston; Class II, Basement Recreation Room—1st prize, \$150.00—William H. Harrison and Walter C. Myall, Los Angeles; Class III, Combination Kitchen & Breakfast Nook—1st prize, \$150.00—Henry Titus Aspinwall, Great Neck, N. Y.; Class IV, One-Room Camp Cottage—1st prize, \$150.00—Frank F. Polito, Chicago.

Farm Power—Modernization of rural communities is providing a market for new types of equipment on farms. Approximately 1,000,000 farms are supplied with electricity, either from central stations or individual light plants, according to Louis Ruthenburg of the National Electrical Manufacturers' Association, who has just completed a survey.

Building Statistics Show Slight Improvement

BUILDING permits in 565 cities and towns of the United States during the month of August amounted to \$32,921,292, according to official reports made to S. W. Straus & Co. This figure represents a 1/2 of 1% increase over July, 1932, when the volume for these cities was \$32,747,091.

The 25 cities, as a group, reporting the largest volume of permits for August, show an increase of 22.1% over July, 1932, a decline of 70.2% from August, 1931, and a decline of 74.6% from August, 1930.

Eight of these cities made individual gains over August, 1931: Baltimore, Wichita, Sioux City, Albany, Wilmington, Terre Haute, Macon and Allentown.

Six cities registered advances over August, 1930: Wichita, Sioux City, Wilmington, Terre Haute, Macon and

Allentown. The 25 cities reporting largest volume of permits for August are as follows:

	Aug., 1932	Aug., 1931
1. New York, N. Y.	\$ 4,576,260	\$32,421,877
2. Baltimore, Md.	1,128,120	886,320
3. Philadelphia, Pa.	1,123,400	2,483,035
4. San Francisco, Calif.	1,035,774	1,992,305
5. Washington, D. C.	1,017,740	3,375,650
6. Los Angeles, Calif.	859,118	3,069,847
7. Wichita, Kans.	771,739	524,552
8. Cleveland, Ohio	667,650	1,606,450
9. Sioux City, Iowa	645,255	209,035
10. Albany, N. Y.	487,909	283,752
11. Wilmington, Del.	467,354	108,788
12. Terre Haute, Ind.	452,674	16,824
13. Boston, Mass.	406,523	2,162,317
14. St. Louis, Mo.	395,377	935,193
15. Milwaukee, Wisc.	395,038	774,322
16. Yonkers, N. Y.	368,700	599,174
17. Minneapolis, Minn.	367,890	856,950
18. Detroit, Mich.	366,105	1,133,492
19. New Orleans, La.	364,536	586,337
20. Chicago, Ill.	347,600	3,337,230
21. Macon, Ga.	333,366	68,801
22. St. Paul, Minn.	294,121	430,557
23. Allentown, Pa.	287,120	201,650
24. Denver, Colo.	267,535	766,200
25. Dallas, Texas	255,339	293,005
TOTALS	\$17,684,243	\$59,123,663

Bond Defaults—Inadequacies of the present building appraisal system are the basic cause of mortgage bond defaults totaling millions of dollars, says the Associated General Contractors of America. Its governing board will consider the desirability of sponsoring a model uniform State law for the establishment of a system of certified building appraisers October 10.

Paint-Up Drive—"A vigorous offensive program" in paint-selling channels throughout the United States, in which more than \$1,000,000 for advertising is being invested in trade papers, magazines, 2,643 newspapers and dealer helps, is announced by George A. Martin, president of the Sherwin-Williams Company, beginning at once.

The advertising, which will appear in every state, will stress the importance of protecting surfaces against further damage by ruinous fall and winter weather, and also will feature the greater desirability of structures that are kept fully protected by good painting, outside and inside.

Shingle Purchase—The Twin City Lumber and Shingle Company has purchased the patent rights to the Edham process of producing stained shingles and will manufacture Edham products in a modern plant which will be operated in connection with the wholesale distributing yard located at Minnesota Transfer, according to an announcement made this week by R. M. Cross, general manager of the company.

J. A. Edgecumbe, formerly president of the Edham Company, Inc., who has been identified with Edham Sunfast Shingles since their inception, will be in charge of the stained shingle division of the Twin City Lumber and Shingle Company.

World's Fair—How the average family may be provided with a better place to live at less cost, how all the furnishings, decorations and equipment that go into their homes can be made more attractive, how the most scientific appliances for reducing the housewife's labor can be furnished, how by means of modern heating and air conditioning the home can be made more livable both in winter and summer—these and scores of other things of vital interest to builders will be demonstrated in the Home and Industrial Arts Show of A Century of Progress Exposition, it is announced by Chicago's 1933 World's Fair.

Tax Trend—Summarizing recent state tax action, the National Association of Real Estate Boards says the new Indiana tax laws indicate the trend of thought toward state control of local budgets and assumption by states or counties of township responsibilities which can be more economically managed by the larger governmental units. Public roads, public schools, and the function of assessment are the three functions of local government in which this trend to state or county direction is now strong, the Association declares.

Lumber Men to Meet At Louisville, Oct. 26

THE National Retail Lumber Dealers Association will hold its 16th Annual Convention at the Brown Hotel, Louisville, Ky., October 26th, 27th and 28th, according to Al J. Hager, President, Lansing, Mich., and Secretary Adolph Pfund. A profitable and interesting program is being arranged. It is reported that the Louisville, Ky., dealers are making elaborate preparations to receive delegates from all over the country, which will insure an enjoyable as well as worth while session.

New Refrigerator Plan—The Republic Refrigeration Company of Cleveland announces that it is licensing distributors in a national way according to a new plan. Says William Pace: "This plan calls for decentralization of assembly, allowing distributors the assembling profit. Shipments go direct to distributor's warehouse and the distributor pays exactly the same price we pay."

Philippine Builders—A firm of builders and developers that is still doing business in spite of the depression is Magdalena Estate, Inc., New Manila, "The Suburb Beautiful". An attractive booklet in colors, printed both in English and Spanish, has just been issued by the firm showing the types of homes they build and describing the attractions of Magdalena Estate.

Rapid Progress—The oil burner, fast developing into one of the country's leading industries, with one billion dollars worth of equipment sold during the past 12 years, and annual sales volume in fuel and oil and equipment of \$400,000,000, has attracted the attention of such industrial giants as General Electric, Standard Oil of Indiana, Westinghouse, Standard Oil of New Jersey, and General Motors and they have now invaded the home heating market, Morgan J. Hammers, president of the American Oil Burner Association, asserted at a meeting in New York City. "Automatic heating of homes by oil has cast off its swaddling clothes. The industry has passed the pioneering stage and now enters an era of mass marketing. Less than four per cent of the homes in the United States have oil burners; ten years hence twenty per cent will enjoy the comfort and convenience and economy of automatic heating by oil."

Lumber Orders Increase—Contrary to seasonal expectations, lumber orders during the week ended August 29 were not only the largest in volume reported for any week of 1932 but showed a higher percentage over production of any week since March, it is indicated in telegraphic reports to the National Lumber Manufacturers Association from regional associations covering the operations of 635 leading hardwood and softwood mills. Orders received by these mills amounted to 162,236,000 feet or 46 per cent above production. Production was 110,841,000 feet, or about the same as during the past five weeks. Shipments amounted to 141,652,000 feet, or 28 per cent above the cut.

New Catalogs Offered

Architectural Aluminum

A folder on "The Care and Maintenance of Architectural Aluminum and Other Decorative Metals," is being distributed by the Metal Refinishing Products Company, 3019 E. 61st St., Cleveland, Ohio.

Concrete Joist Floors

A folder which offers "Authentic Proof That Reinforced Concrete Construction with Concrete Joist Floors Is Economical," is offered by the Concrete Reinforcing Steel Institute, Tribune Tower, Chicago.

Insulation

A broadside containing opinions of users on Flax-li-num and Bi-Flax, is being distributed by the Flax-li-num Insulating Co., St. Paul, Minn.

Suggestions for Dealers

The Lehon Company, W. 44th St. and S. Oakley Ave., Chicago, has pub-

lished an interesting booklet under the title "Twisting the Tail of Present-Day Competition—1932 Edition," which contains much material of value to the building material dealer.

"Humidification for Residences"

Under this title, the Engineering Experiment Station, University of Illinois, Urbana, Ill., has published a research study by Alonzo P. Kratz, which is listed as Bulletin No. 230.

Plywood Bulletins

Two new Douglas Fir Plywood Construction Bulletins have been published by the Douglas Fir Plywood Manufacturers Association, Skinner Bldg., Seattle, Wash., under the titles "Money Making Plans for Builders" and "7 Ways for Builders to Keep Busy."

Farmhouses

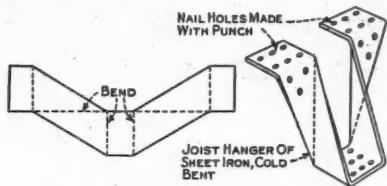
Special Bulletin No. 142, of the University of Minnesota, Agricultural Extension Division, St. Paul, Minn., was prepared by H. B. White and L. W. Neubauer, and deals with the planning of modern farmhouses.

PRACTICAL JOB POINTERS

A reader's exchange of tested ideas and methods, taken from their own building experience. Two dollars will be paid for each contribution published.

Stirrup for Joist Support

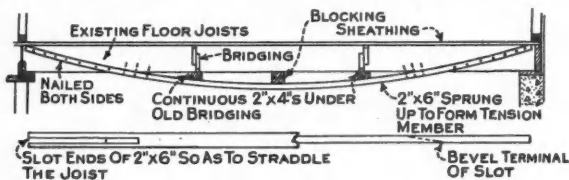
AN idea for use in remodeling a house is that of using sheet iron for stirrups, made as shown in the accompanying illustration. Strips of sheet iron are quickly cold bent to the shape shown, and, with a nail punch, all holes are made for nailing. While this stirrup does not differ much from the usual iron hanger, it is simpler. The main strength difference rests in the increased bearing at the edge of the header and the bottom of the beam, and the iron does not break into wood nearly like the iron hanger of smaller width. As many nails can be inserted as desired, as other holes are made quickly with a punch.—B. S. LUERS, 2355 Ashmead Pl., N. W., Washington, D. C.



How home-made sheet-iron hangers are designed.

Short Cut in Making Screens

SAVE considerable time when cutting the moulding for screens by tacking on the moulding to within about six inches of the corners. When this is finished I place a very thin board under the corner and saw at an angle of about 45 degrees. This gives a perfect joint every time and does away with the necessity of measuring and cutting with a miter board. The board is removed after sawing and the corners tacked tight.—W. A. WHITFIELD, 3025 Dudley, Lincoln, Neb.

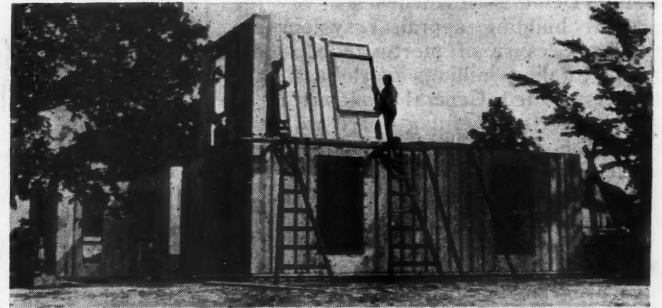


A 2 x 6 sprung into place stiffens floor.

Stiffening Springy Floors

IN modernizing work floors are often encountered that are subject to excessive vibration. This is usually because of not sufficient depth in the joists to provide the required stiffness. Sometimes it is not convenient nor desirable to plank on another joist, then the herewith indicated underslung method can be used to advantage.

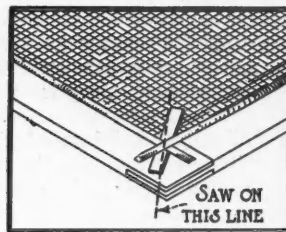
Continuous 2 x 4s are nailed to the under side of the joists, preferably under the bridging. A 2 x 6 of good length is slotted so that the ends may pass up on either side of the joist. The 2 x 6 is then sprung up as indicated so that it bears on the two 2 x 4s and forms a catenary curve under the joist. The ends are well nailed. The center, or in long spans, at a couple points, is blocked down so as to prevent the tendency of the 2 x 6 to straighten out under load. The very act of springing the 2 x 6 into place helps put the crown back into the old joists. One of these on every third joist should take the spring out of a floor, at least to a point equal to joists 4" greater in depth to those originally used.—E. O. BROSTROM, Architect, 600 Reliance Bldg., Kansas City.



Using scaffold horse in erecting section of Cleveland steel house.

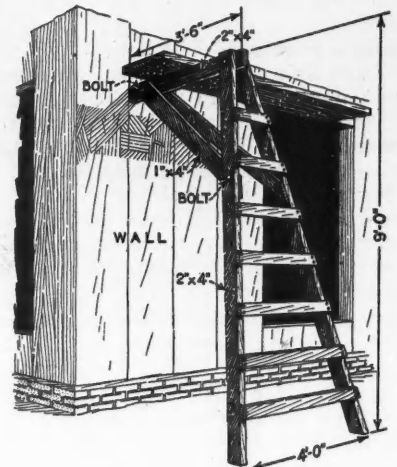
High Scaffold Horse

IN the construction of the frameless steel house being built at Solon (Cleveland) Ohio, we are using two high scaffold horses for second-story work. These horses are built with three legs, two resting on the ground and one against the building. They make a firm, safe support for scaffold planking, are light and easily moved and take up little space. Each horse is also a ladder. Built of hard pine or maple, these horses will last a lifetime.—T. R. SKOVE, Solon, Ohio.



Above—Method used by W. A. Whitfield to make mouldings fit.

At right—Construction details of scaffold horse shown in use above.

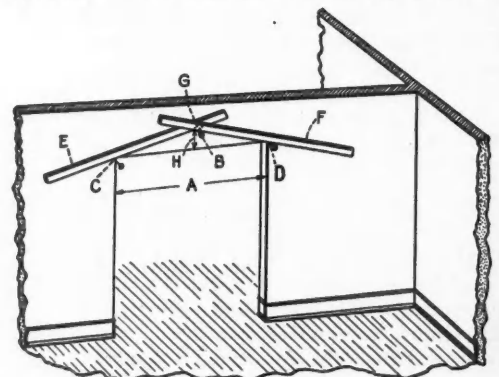


Laying Out an Arch

HERE is a simple method of laying out an arch, or drawing an arc of a circle through any three given points: When given the width of archway "A" and height of arch "H", to draw an arc through points "B", "C" and "D".

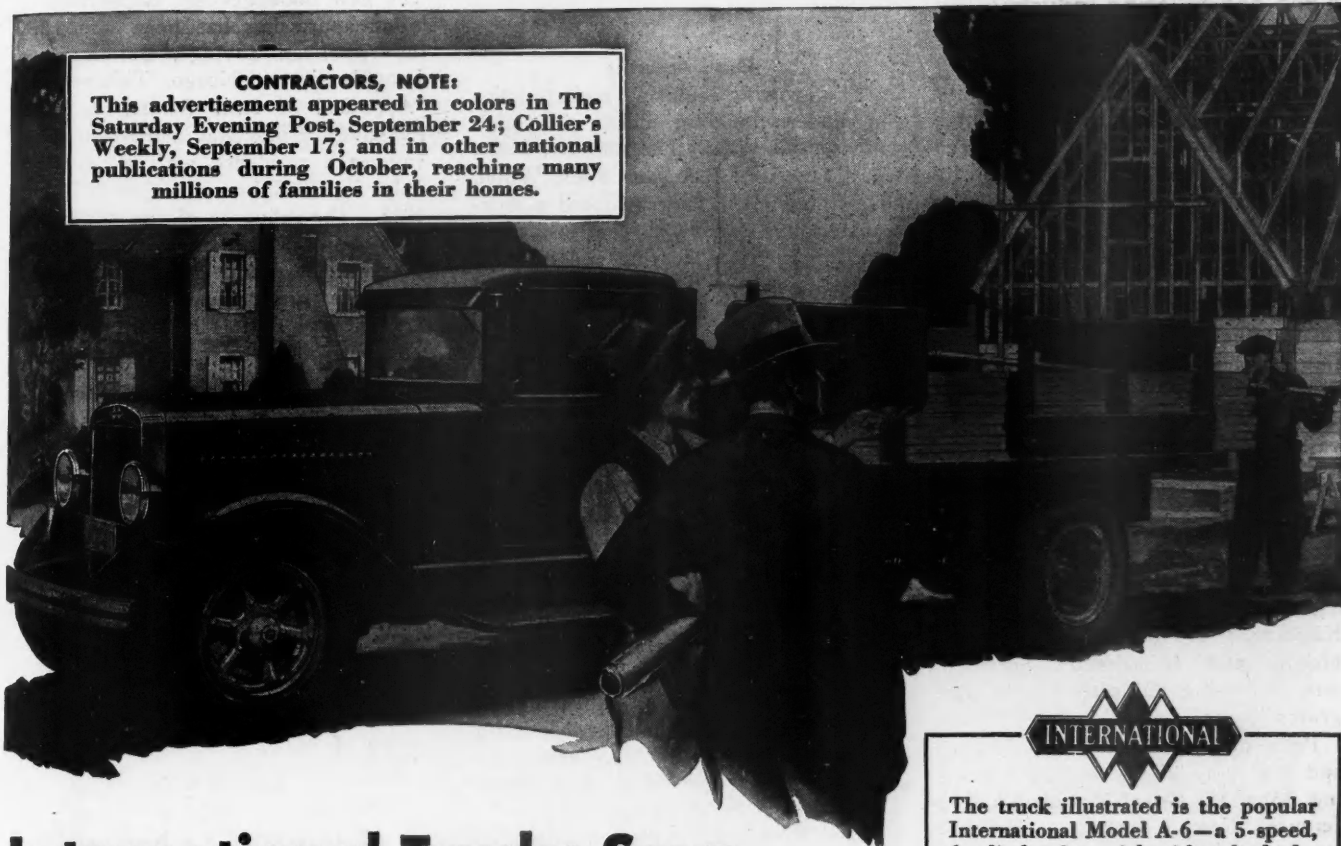
1. Insert nails at points B, C and D.
2. Lay straight edged boards at E and F along nails B and C and B and D intersecting at point G.
3. Fasten securely at G.
4. Remove nail at B.
5. By holding a pencil at intersection (G), and sliding boards across nails C and D a perfect arc will be formed which will pass through points B, C, and D.

This method may be used to advantage when laying out an arc of a circle when given any three points, especially when the center is inaccessible.—M. L. MANCHESTER, Liverpool, N. Y.



Method of laying out arch for partition or fireplace simplifies problem.

BUILD NOW—at Lower Costs!



CONTRACTORS, NOTE:
 This advertisement appeared in colors in The Saturday Evening Post, September 24; Collier's Weekly, September 17; and in other national publications during October, reaching many millions of families in their homes.

International Trucks Save Money for Contractors, Builders, Dealers and You!

NOW'S the time to build that home you've wanted! Costs are down—way down. Since the peak period of 1926-28, they have dropped 25% to 40%. A house that would have cost around twelve thousand dollars five years ago can now be yours for less than eight thousand.

The present better housing movement endorsed by our Government and President has the practical backing of the entire building industry. Contractors, builders and dealers alike are now offering you economies unheard of since before the war.

Economy—rigid economy—is the need which has put International

Trucks into the foreground of the building picture! Builders who never used to keep account of equipment costs now watch every maintenance and operation penny. And this present-day need for low-cost trucking is finding its answer in International Trucks and Service for building material and lumber dealers, and for builders and contractors in every type of work.

Learn what International Trucks have done for other industries—and what they can do for you in yours. Whatever your business—its size or nature—you will find that there is an International to cut your costs.

There is only one way to estimate



The truck illustrated is the popular International Model A-6—a 5-speed, 6-cylinder, 3-ton job with stake body. The International Line is complete, with fast, light trucks for pick-up work, speed models, heavy-duty models, and trucks especially built for dump-truck work and semi-trailer service. Sizes range from ¼-ton to 7½-ton, and any chassis or body requirement can be met exactly.

New low prices prevail on the entire line. The 1½-ton, 4-speed Model A-2, for instance, has been reduced to

\$615

for 136-inch wheelbase chassis f. o. b. factory (taxes extra)

International Company-owned branches at 188 points, and dealers everywhere.

accurately the value of an International, or to judge the economies it will effect for you—pick out the model you want and put it to your test, *right on your own job*. Arrange this demonstration with an International branch or dealer. Write us for information.

INTERNATIONAL HARVESTER COMPANY
 606 S. Michigan Ave. **OF AMERICA** Chicago, Ill.
(INCORPORATED)

INTERNATIONAL TRUCKS

THE BUILDER'S LIBRARY

Brief reviews of some of the best recent books of interest to men in the construction industry

Building Conference Reports

Eleven important volumes, all of which should be of vital interest to men in the building industry, have been published or will soon be published by The President's Conference on Home Building and Home Ownership. All phases of building and housing are taken up and treated in a thorough, instructive manner.

Titles include the following: "Planning for Residential Districts"; "Home Finance and Taxation"; "Slums, Large-Scale Housing and Decentralization"; "Home Ownership, Income and Types of Dwellings"; "House Design, Construction and Equipment"; "Negro Housing"; "Farm and Village Housing"; "Housing and the Community, Home Repair and Remodeling"; "Household Management and Kitchens"; "Homemaking, Home Furnishing and Information Services"; and "Housing Objectives and Programs."

Price of the volumes is \$1.15 each, and they may be secured by addressing John M. Gries, President's Conference, New Commerce Building, Washington, D. C.

Help for Stairbuilders

"Modern, Practical Stairbuilding and Handrailing" by George Ellis, is a new book of especial interest to architects and builders. It is a large volume containing some 108 full-page plates and is a very complete treatise on stair construction and design, handrailing and wreath making. Publishers are J. B. Lippincott Co., Philadelphia, and the price is \$7.50.

Contemporary American Architecture

Three new volumes devoted to the work of Ely Jacques Kahn, Raymond M. Hood and Ralph Adams Cram give an excellent picture of contemporary American work, as illustrated by these men. Edited by Arthur Tappan North, the books are beautifully illustrated with photographs which give a concrete picture of the interpretation which these three important architects are giving to the problems of modern American work. Published by Whitteley House, New York; price, \$3.00.

Standard Construction Methods

A second edition, brought thoroughly up to date, of "Standard Construction Methods" by G. Underwood, construction engineer and author of "Estimating Construction Costs" has recently been published by the McGraw-Hill Book Company, New York. The book has 500 pages; price \$5.00.

Good Acoustics

The growing importance of acoustics in modern building makes this book of especial value. The authors, Hope Bagenal, A.R.I.B.A., and Alex. Wood, D.Sc. and M.A., have provided a thorough-going study of the properties making for good hearing and freedom from noise and the acoustic material necessary to the proper designing of modern buildings. The book contains 415 pages, is published by E. P. Dutton & Co., New York, and is priced at \$6.75.

Better Homes Manual

Although primarily designed for readers who are considering the building or remodeling of the home, this book contains much valuable information about financing, planning, building and furnishing that will also interest the contractor. The editor of the book is Blanche Halbert, research director of Better Homes in America, Inc., and chapters on the various important subjects have been contributed by experts in their field. The volume is published by the University of Chicago Press, Chicago, contains 782 pages and is priced at \$3.00.

Practical Architecture

C. Matlack Price, well known architectural writer, has here provided a book on architecture for the average intelligent person. In Part I, he gives a guide to style and describes briefly the origins of the various architectural types. In Part II, Mr. Price takes up the more practical matters of architecture in connection with home building. "Architecture and the New Age" is the subject of the third section in which modern trends are described. Publishers are the J. B. Lippincott Co., Philadelphia. The price is \$7.50.

New Engineering Handbook

The plan for this handbook was conceived in the belief that a great amount of fundamental engineering data could be assembled and presented in a compact pocket book of not over 900 pages. This volume succeeds, and the 900 pages are on such thin paper and so artistically bound that an attractive and handy volume results. The editor of the "General Engineering Handbook" is Charles Edward O'Rourke, assistant professor of Structural Engineering at Cornell University. As associate editors he has a long list of authorities in various fields of engineering and construction. The book is a thorough-going authoritative handbook. It is published by the Mc-

Graw-Hill Book Co., New York, and the price is \$4.00.

Appraisal of Homes

A new book devoted exclusively to home appraising has been issued by the American Savings, Building and Loan Institute, Chicago. This volume, "Appraisal of Real Estate," contains 150 pages of practical instruction about valuing a residence with an eye not only for 1932 but also for 1927 and 1942. The influence of city conditions upon home values is treated in four separate chapters, dealing with city structure, growth, appraising the lot, influence of rentals and taxation and elements affecting real estate values.

Architects' and Builders' Handbook

The eighteenth edition of this Kilder-Parker handbook, first published in 1884, comprises more than 2,000 pages of complete reference data, revised to include the most recent findings and methods. Every form of construction is treated and rules and tables are given for computation. The book is profusely illustrated with drawings of construction details. Published by John Wiley & Sons, Inc., 440 Fourth Avenue, New York, at a price of \$8.00.

Cost Estimating

"Estimating Building Costs" by Frank E. Barnes is a book published by the McGraw-Hill Book Company, New York, now in its third edition. Each section of this book has been revised to conform to the latest construction practices. It comprises chapters devoted to estimating costs on all of the various phases of construction work. The price is \$5.00.

Advertising Real Estate

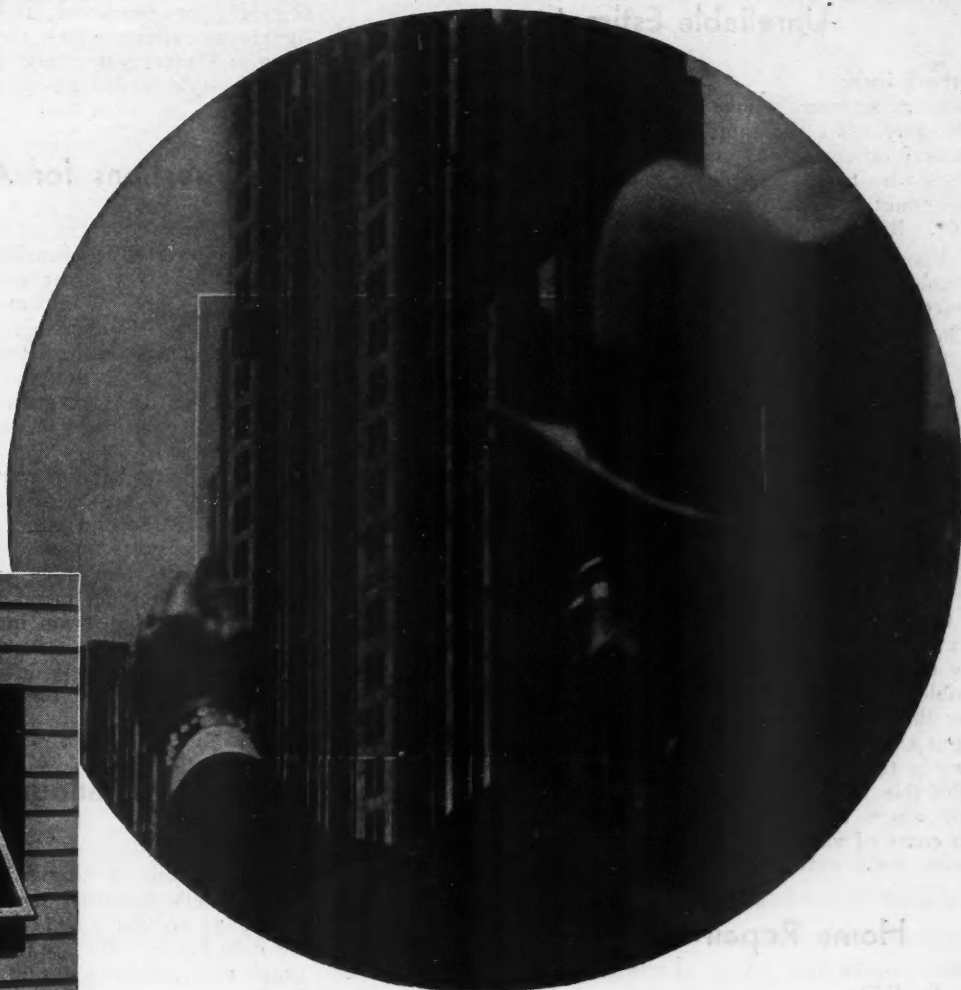
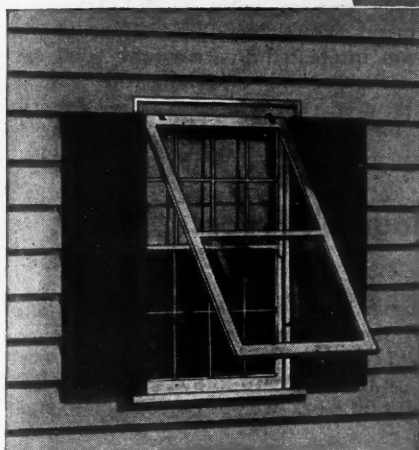
Based on the experiences of successful realtors in various sections of the country, this book tells how, when and where to use advertising as a real estate "sales-tool." Every kind of advertising, from classified ads. to billboards and direct mail is covered and illustrations reveal, in practical detail, the mechanics of preparing the ads. The book is published by The McGraw-Hill Book Company, 370 Seventh Avenue, New York.

The Economic Use of Land for Homes

What effects have lot size, open space, and block and street layout on the cost of the home? As applied to community developments and neighborhoods of small homes, this is the question which Robert Whitten and Thomas Adams have set out to answer in their book: "Neighborhoods of Small Homes," published by the Harvard University Press, Cambridge, Mass. The present situation as to the building of houses is outlined and present subdivision practice is discussed.

this

IS THE KIND OF GLASS TO USE IN STORM SASH



This is one of the most exacting tests of window glass that can be made . . . photographing, through it, a building which has many clearly defined vertical lines. L·O·F Quality Glass is so flat and of such exceptionally high quality that the detail of those lines is remarkably clear and sharp even to the keenly critical eye of the camera. There is no difference in the way the lines appear either through the glass or above it.

When you can show home-owners Government statistics that prove Storm Sash saves from 15 to 20% of fuel costs in homes with no other insulation, then show them L·O·F Glass as flat and clear and brilliantly beautiful as that illus-

trated, *you've made a sale.* There's profit in Storm Sash. Libbey-Owens-Ford Quality Glass for windows not only helps you sell, but *protects* your profit because it is less brittle and easier to cut and there is, consequently, less breakage.

If you have not received our folder containing the United States Government statistics on fuel saving with Storm Sash, write us for it today.



LIBBEY-OWENS-FORD GLASS COMPANY, TOLEDO, O., manufacturers of Highest Quality Flat Drawn Window Glass, Polished Plate Glass and Safety Glass; also distributors of Figured and Wire Glass manufactured by the Blue Ridge Glass Corporation of Kingsport, Tennessee.

**LIBBEY · OWENS · FORD
QUALITY GLASS**

LETTERS

from Our Readers

You are invited to write your views on any subject of interest to the building industry. 300 words should be enough!

Unreliable Estimates

Columbus, Ohio.

To the Editor:

Concerning your "Home Cost Service":

Recently using the same well prepared plans and specifications I obtained bids on one item from three responsible dealers who handle nationally known products of about the same quality. One bid was \$124.00, one \$89.00, and one \$54.00. Ridiculous, but true.

I have kept accurate records for years. Examples like the above are the rule, not the exception, although the difference is not generally so great.

There is no industry today as disorganized as building nor has been for years. Your system will work in some cases, but things look pretty hopeless to me as long as conditions like the above exist.

I can trust my estimates to no one dealer.

R. R. FLING,

with The C. & G. Realty and Construction Company.

Cure for Wood Worms

Hastings, Nebr.

To the Editor:

In answer to the inquiry by Graves and Hemmes as to how to exterminate worms in woodwork, I have found that flexible collodion will do away with the worms if painted over the small holes where you see them boring. Be sure to put enough over the opening to shut out the air, and the ether in the collodion will kill them. I saved an expensive buffet this way, and later got rid of the worms in an oak floor where they showed up after we had varnished with two coats of varnish.

A. A. MITCHELMORE, Contractor.

Home Repair Activities Praised

Washington, D. C.

To the Editor:

Thank you for sending me the August issue of the AMERICAN BUILDER. I hope it will be possible eventually to crystallize the opinion of the construction industry into a comprehensive program for the stimulation of remodeling and reconditioning. Certainly your publication did a splendid job in presenting the facts of the case in your August issue.

FREDERICK M. FEIKER, Director,
Bureau of Foreign and Domestic Commerce.

Wants More Design Photos

Denver, Colo.

To the Editor:

I have talked recently with several builders and designers of homes, and they all feel that there is a great need for a publication which will give more complete attention to smaller type of houses, such as we have here in Denver. They want ideas of artistic exteriors that will sell, and in this connection it would not be necessary to present a floor plan with such exteriors.

If you could publish photographs, or take photographs and work them over with ink in the form of architect's elevations it would be fine. Photographs of interior design or details of interiors would also be of great interest.

If you would send a photographer into the fine residence sections to obtain photographs of artistic exteriors and publish several of them every month, I feel that you would be

helping your circulation, as it would give builders and designers something which they are diligently searching for. Here in Denver you would find much good material in the English style, which has gone over great here.

M. R. BERGSTROM.

Questions for Aquarium Builders

Birmingham, Mich.

To the Editor:

I am interested in securing data on construction of aquariums. Possibly you can give me some information or recommend a source of information.

I am primarily interested in small home aquariums, glass construction, say, from 2 feet to 5 feet long by 1 foot to 2 feet wide. I am in doubt as to the best putty to use.

1. Can you use successfully wood construction for corner posts, paint, and have a good job, with a wooden bottom?
2. Does putty have to remain more or less elastic to take care of expansion or contraction of glass, or can it become hard; and what, in your opinion, is the proper type of putty to use under water?
3. I believe steel angle corners, with wood bottom covered with sheet metal, would be the best type of construction, but I am interested to know the facts concerning wooden corners and especially the type of putty, and in designs.

Thank you for any information you care to give me.

F. O. DAY.

Planograph Process

Portland, Oregon.

To the Editor:

In your issue of August in the article, "How Washington Builder Sells Houses," there is mentioned the producing of an 8-page booklet 8½x11 inches by the planograph process for only \$30.00. We are interested to know what the planograph process is—as in our work we have occasion to make booklets.

J. E. TOURTELLOTTE, Architect.

Answer:

The planograph process is a variety of lithography or offset printing, which is usually done by printing establishments which have offset equipment. It produces any kind of copy—pictures, sketches, printing or handwriting, inexpensively. Printing firms in most large towns will do such work.

—Editor.

Another Campaign Launched

Huntington, Ind.

To the Editor:

We appreciate very much your courtesy in having the Division of Building and Housing of the Department of Commerce forward their standard program material for organizing a home repairs campaign. We have discussed this matter considerably with members of your staff and know that you are vitally interested in this program.

Last night the local Chamber of Commerce Building Trades Committee had a meeting and decided to put on a repair and remodel program here in Huntington for the first two weeks in October. Heads of these committees are being appointed today and it will be a pleasure to advise you of the success of that program and to thank you for your interest and help in putting it on.

K. F. TRIGGS, Secretary The Majestic Company.



NO MATTER WHAT YOUR HAULAGE PROBLEM GMT CAN SOLVE IT

Are you interested in saving money? Would you like to write fewer figures on the debit side of your ledger, and use more ink on the black? Then let's consider the things which affect your haulage costs, for just a moment.

Would you like to select your equipment from the most complete line of trucks and trailers in the automotive industry? *GMT is that line.*

Would you like your trucks to be designed by the most experienced group of automotive engineers in the industry? *GMTs are.*

Would you like the economy, stamina and long life of your trucks to reflect the merciless testing over the mud, sand, brick, cobble and concrete roads of the world's most famous proving ground? *GMTs are doing it every day.*

Would you like to profit by the results of the most careful and exhaustive two-year survey of trucking practices ever carried on among America's largest and best-managed units in your industry? GMT has made such a survey, and the results are contained in a report that you can get from your nearest GMT representative.

Call in that representative. With him, go over your requirements as to road, load, speed and cost. Check the GMT specifications and delivered prices against any other in the industry.

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Time Payments Available
Through Our Own Y.M.A.C.

How to Do a Better Selling Job

(Continued from page 13)

tively and promptly?

This is not a guessing contest; no one has a list of answers to these questions applicable to your market, excepting through pure accident. These five questions are not easily answered, but in the correct answers lies the key to your organized sales proposition—the foundation work for sales training and the development of your selling staff. Here, then, are some numbered suggestions which may help you locate the correct answers:

1. Ask your market. The dealer mentioned above, who made a house-to-house canvass of his market, learned a lot about his market's interests. He dug up a gold mine of facts about products his townsmen would probably buy, if properly sold. He found house improvements the most important general classification; an unexpected interest in new floors, basement rooms, attic rooms, and hundreds of minor repair jobs. Garages stood high in point of interest. Many of the thousands of prospect cards had several items checked. Most of them indicated whether interest was immediate or future. Primarily the survey showed which products were probabilities and their order of rank in interest. A less accurate survey could be made through the co-operation of active contractors and sub-contractors. Better, by far, to get the information direct from the prospects.

2. Here again let the prospect give the answer aided by your own imagination. Avoid being influenced by your own convenience, or by the ordinary precedents in the field. You can reason that the prospect prefers to buy a completed unit from someone well qualified to sell, service, deliver and guarantee that unit. Anything less than that simply bucks the established buying habits of the general public—sets you swimming against the current instead of with it. Spare the prospect every possible mental and physical effort in buying. Make it easy. Make it safe. Make it a pleasure, if you can, and so give the customer some fun in spending his money; it doubles his satisfaction.

3. Obviously, if you and your competitors offer the same units, with the same service, at the same terms, the prospect's decision must rest upon price or friendship. A price advantage is helpful, no denying, but it is not all important. See if some of your listed units can be standardized completely, or partially. Can they be made stronger, better looking, more enduring, more convenient, more economical? Can you adopt construction methods for unstandardized units which will give you a sales advantage—an effective selling point?

Take a simple example: would you have a good selling point in using creosote treated sills for all your garages? Aluminum painted siding? Something which sets your products above the common herd? Such features will help maintain profitable selling prices, help overcome price competition, help increase your volume and your profits.

4. By comparing your products with competing products, grouped by prices, you will know where you have the advantage in terms and financing service, and where your competitors have the advantage. That is enough to indicate what you need in terms and financing to give you an even footing.

5. Correct and detailed answers to the first four questions will go far toward organizing the sales proposition in terms of consumer requirements. The last question concerns the method of giving information to your prospects to influence them to buy. The following points are important:

a. Standardized units such as garages, flooring, roofing, and dozens of made-up items, are treated as merchandise, ready to be sold and delivered. Other units such as house repairs and improvements, alterations, which cannot be standardized (excepting partially, as to materials or methods) are to be represented in your sales work by typical examples.

b. Work up a complete and concise description of each unit, standardized items and typical examples, listing its features of service (Point No. 2), its extra advantages (Point No. 3), and its terms or financing service (Point No. 4).

c. Have illustrations of standardized units and of typical examples of unstandardized units.

d. Work up your selling prices on each item with whatever variations may be needed. Your selling price should include the cost of selling as well as your deserved profit.

e. Develop a list of advantages realized by the owner of each unit. For example, a GARAGE:

It protects the car, reduces depreciation, preserves the finish, saves labor or expense of frequent washing, makes starting easier in cold weather. Provides a place to store oil, grease, tools, garden equipment, outdoor playthings, screens and storm windows. Overhead door prevents snow blocking, is easier for women to operate, eliminates sagging and damaging when driving in or out, cannot be blown and slammed by the wind.

Home Loan Bank Progress

(Continued from page 15)

second, there has never been enough of it to meet the needs of home owners in all parts of the country.

Funds for home financing are inadequately distributed, so that while sections such as the northeast may have a surplus the west and south may have a shortage.

"The great increases in money for home financing which the Home Loan Bank makes possible will be realized if your institutions make full use of them. The greater the volume of mortgages deposited with the banks as security for loans, the greater the amount of bonds that can be sold to an investing public. With the security almost equal to that of government bonds the tax exempt debentures of the Federal Home Loan Bank will find a ready market. No one can doubt that. How many of these bonds will be available for purchase by the public, and consequently, how much money will be available for additional home financing, will depend upon you.

"Because of the greater safety of amortized loans you can make first mortgages for 75 or 80 per cent of the real value of the home, and so largely eliminate the need for costly second mortgages. The Federal Home Loan Banks put a premium on the long-term amortized loan by lending up to 60 per cent of its unpaid principal. They thus invite you especially to make them your own credit reservoir and to use them.

"So far, I believe, we have in our thinking but scratched the surface of the possibilities of the Federal Home Loan Bank System for remaking on better lines the homes in which we live. The System is capable of doing infinitely more for housing than merely improving our home-financing structure. I want to suggest some of these things for your consideration in the coming months and years. First, because of its obligation to invest the people's money safely, it will have to effect an improvement in the system of appraisals which now leave so much to be desired. Safety of operation will also force the system to develop a competent survey of real estate statistics in every community in which it lends money. The resultant knowledge will be a major check on real estate booms, overbuilding, and inflation, with the subsequent bitter cathartic of deflation. The desire of local home-financing institutions to obtain mortgages which can readily be pledged with the Federal Home Loan Banks may very conceivably be directed to improve the quality of construction of houses upon which loans are made. For the same reason, local home-financing institutions may be stimulated to support city planning and zoning activities that will increase the stability of home neighborhoods and the consequent soundness of investment in homes."

Best Urges Modernizing

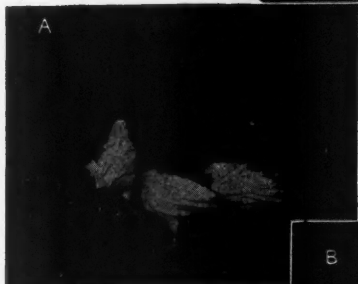
William E. Best, retiring president of the League, pointed out the need for funds for low cost homes and modernizing. He said:

"We will not have normal conditions until we can make mortgage credit available to the small home owner and to the individual who desires to build a home.

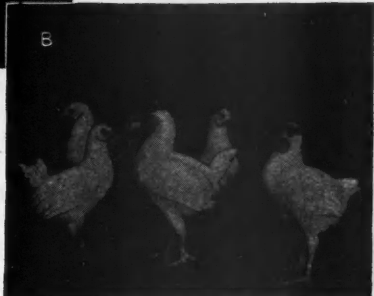
"There must be some resumption of activity in the field of residential construction, and there is no reason for not resuming it so long as millions of our people are housed in unsanitary hovels without any of those things which we

(Continued to page 50)

Would you believe these chicks are the SAME AGE?



A. Six weeks old—sick, weak, and victims of rickets . . . because they were raised under ordinary glass . . . Four of the original seven died.



B. Six weeks old . . . all seven alive and normal, healthy, strong, and entirely free from rickets . . . because they were raised under Lustraglass.

Carefully controlled experiments by an authority on poultry husbandry definitely prove the biological benefits of sunlight transmitted by Lustraglass. The chicks raised under ordinary window glass were deprived of the ultra-violet rays which produce Vitamin D and prevent rickets. The chicks raised under Lustraglass received plenty of ultra-violet rays and were free of any rachitic symptoms. The photographs above show the remarkable difference.

The results of these experiments are confirmation of the fact that Lustraglass transmits a substantial volume of ultra-violet rays of sunlight . . . Because it transmits these valuable rays and because it is a clearer, whiter, flatter, more lustrous glass, and because it costs no more than any good window glass, architects and builders everywhere are specifying Lustraglass for every type of building. Send for the Lustraglass booklets A-430 and P-332. The latter contains an interesting report on the experiment with chicks.



Look for this label on every light of genuine Lustraglass.

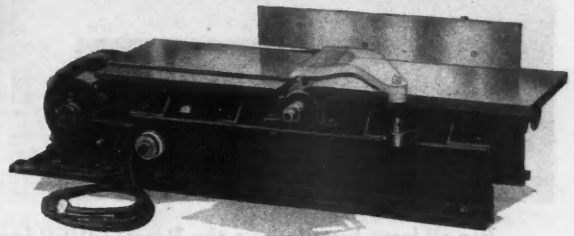
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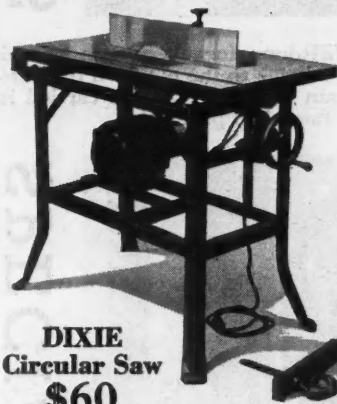


DAISY 6" Jointer \$60 (without motor)

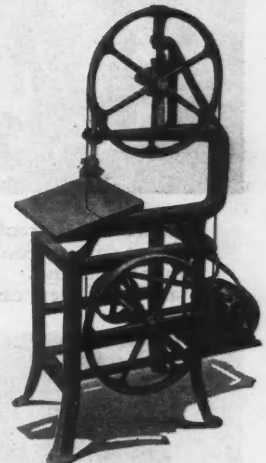
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Parks Improved Machines equipped with high grade BALL BEARINGS means long service, ease in operation, MODERATELY PRICED. Your best preparation for new business and worthwhile profits is a Parks.



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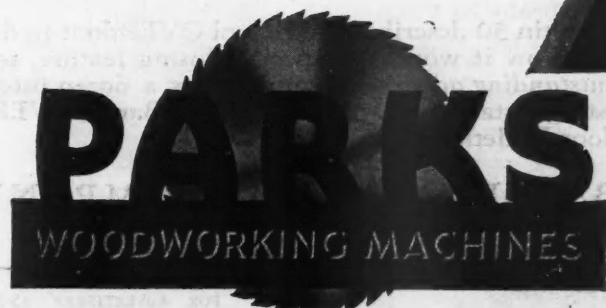
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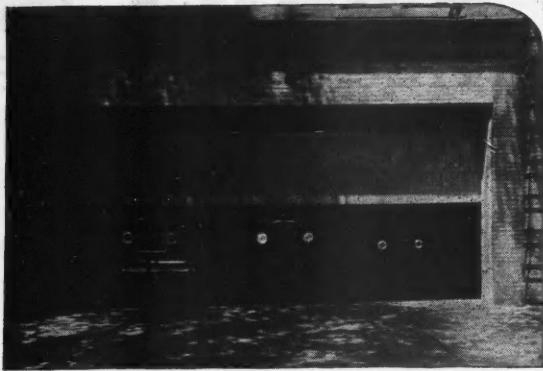
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City

State



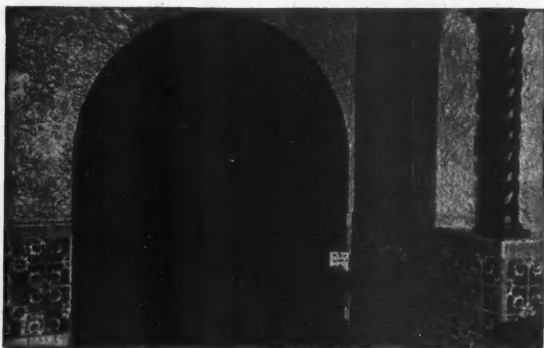
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For all large installations, the Barcol OVERdoor is unexcelled. It is especially suitable for buildings housing emergency apparatus where speed, ease of operation, and dependability are vital.



There is a Barcol OVERdoor for every type of residence garage from the cottage to the mansion or apartment building. Certain standard sizes are carried in stock. Others can be furnished promptly.



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BARBER-COLMAN COMPANY
ROCKFORD, ILLINOIS, U. S. A.

doors • BIG HOMES SPECIAL

Home Loan Bank Progress

(Continued from page 48)

associate with the modern American home. A recent survey shows that there is now no mortgage money for small homes either for refinancing or any other purpose, in 88 per cent of the cities from which the returns came. This is a great opportunity for the Home Loan Bank System to show its worth to the country.

"Overbuilding may be true in some lines of construction, but certainly it is not the whole truth in the home building field. We have hardly scratched the surface in the building of homes in the low cost field. With such homes available, citizens can buy their homes on our time-tested monthly repayment plan in the same way that they can pay rent. Even more important is the need for repairs and rehabilitation. The System's contemplated provision of credit for these purposes will put thousands of men back to work. Recovery will rest in a large measure upon these repairs and construction of new homes."

"Great Reserve System" Says Adams

"The building and loan associations and the insurance companies now have the opportunity to have their own reservoir of credit unhampered by the commercial bankers of America," said Nathan Adams, Texas banker and member of the board. "The government has given them an opportunity to protect themselves and their shareholders.

"There can be no greater responsibility placed upon any executive than the handling of the savings of the people. The depression has taught us that there are no supermen in America. Such great responsibilities, therefore, need the added safeguard of a great reserve system to be owned especially by the institutions which handle the people's savings. That is what we have in the Federal Home Loan Bank Act."

How I Learned a Valuable Short Cut

(Continued from page 25)

he gave me a heated lecture and a very valuable lesson for which I have always felt grateful. Since then I have frequently explained this way of figuring perimeters by the following diagram:

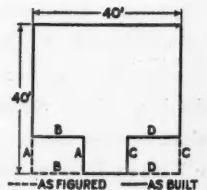
This was the beginning of a very helpful formula that I have incorporated in the House Valuator. It reads, " $L + W \times 2 = P$ ". The "L" stands for length, "W" for width and "P" for perimeter.

Applying this formula to the floor plan illustrated on page 31 of this issue, you can figure the perimeter, or lineal feet of wall, almost as quickly as thought. Ignoring irregularities in the contour we find the maximum length is 55' and the maximum width 35', so $55 + 35 \times 2$ equals 180 lineal feet of foundation wall required for the building.

If you already use this rule when figuring foundations you appreciate its value. If not, I am sure you can make good use of it, and hope you will remember me for having told you, as favorably as I remember my good friend Peter Fredeen who first told me of it.

In case your lumber dealer uses the complete House Valuator Service he can give you other valuable, time-saving rules that will make your estimating faster and more accurate. He can show you how much to add for loss in matching on any size matched lumber, and a short-cut, sure-fire rule for checking board footage of any kind of materials.

It will pay you to ask your lumber dealer, just as it is equally well for dealers to consult with their carpenter and contractor friends. Experience has shown that it is mutually advantageous to "scratch each other's backs", and that it is surprising to find how much each can learn from the other.



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This Company manufactures a complete line of AMERICAN Apollo Best Bloom Galvanized Sheets, Galvannealed Sheets, Heavy-Coated Galvanized Sheets, Black Sheets, and Sheets for Special Uses; also



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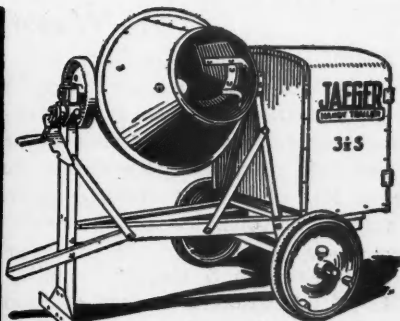
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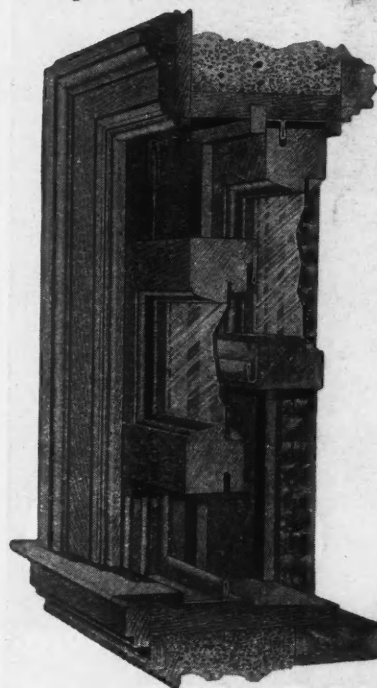
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"HANDY" 3'S
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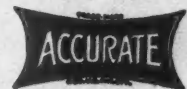
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R I C O
SPECIALLY HARDENED AND TEMPERED
FLOORING NAILS
CUT FROM SOLID PLATE

**"Trashy" Architecture—The Menace to the
Building Industry**

(Continued from page-29)

Now consider the other house we show here. What a contrast! Here is a house in which the distinguishing elements of real English architecture have been carried through faithfully. Note especially how all materials are united to form an interesting composition. The woodwork is true-to-type, the roof correct, in fact all exterior units are in perfect harmony. Today such a home actually costs less to build than the misfit, although their cubical content is practically alike.

The comparison may be carried even further to the interiors of these homes. Notice the hodge-podge interior of the mongrel as compared with the charming interior of the correctly designed home. Which should be the easiest to sell and which would be the one to encourage others to own their own homes? The answer is obvious.

This is typical of what we must build to reawaken home desire in the hearts of the American people. Then we will sell more homes and gradually breathe new life into the sleeping giant—the Building Industry. We must stop the building of mongrels and encourage correct architect wherever possible. Only as we do this can we hope to again regain the success that our industry so long enjoyed.

Let us commit ourselves now to the task of giving our fellow citizens homes they may be proud of not only for the first few years while the charm of newness is still upon them but for the long years to come. It will be good for us all.

**Paper Cement Bags Prove Impervious
to Water**

THOUGH various products may be subjected to careful laboratory tests to assure their suitability before placing on the market, it is in actual use that they must finally meet the test which determines whether or not they will take their place as successful products. An actual experience test of a most striking nature has recently demonstrated the qualities of the multi-wall paper bag as a container for cement. It occurred in the warehouse of H. M. Franklin & Co., of Tennille, Ga. It is described by Mr. H. M. Franklin himself as follows:

"Our warehouse here in Tennille, Ga., was severely damaged by fire. The building was not destroyed, but was severely damaged. Fire originated in the middle of the building and burned for about 30 minutes or more and, for the greater part of an hour, two streams of water were played all over the inside of the building and its contents.

"We had just started unloading a car of cement into our warehouse and had put 50 bags, in multi-wall paper bags, near the middle of the house where the fire originated. The greatest damage to our stock of goods was water damage and thousands and thousands of gallons of water were poured all over the contents. When the water was turned off the floor of the building was covered about three inches deep.

"Our first impression, of course, was that the cement stored in the building was absolutely ruined and of no value whatsoever, but the next morning, upon investigation, we found that every bag of it was in perfect condition. We later sold every bag of it without any reduction in price whatsoever. The paper bags had shed every bit of water that was put on them and no water reached the contents at all. Even the bags that were on the floor were in perfect condition."